

# PROJECT MANAGEMENT PLAN

Spoil Management Plan

Sydney Metro West – Western Tunnelling Package

ISSUE DATE: APRIL 2024

## Document Details

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## Document Authorisation

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Signature	Signature	Signature
23 April 2024	23 April 2024	23 April 2024
Date	Date	Date

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## DOCUMENT CONTROL

The current document version number and date of revision are shown in the document footer. All changes made to the Management Plan during its implementation on a live project are to be recorded in the amendment tables below.

### Revision History

Revision	Date	Description of changes	Prepared by	Approved by
A	31/01/2022	Early Works Submission	GLC Spoil Manager	GLC Project Director
B	16/03/2022	Draft for stakeholder consultation	GLC Spoil Manager	GLC Project Director
C	12/04/2022	Revised draft for stakeholder consultation	GLC Spoil Manager	GLC Project Director
D	16/05/2022	Final draft following stakeholder consultation	GLC Spoil Manager	GLC Project Director
E	03/08/2022	Update to include SOPA comments. Minor revision for Modification 2 and 3 approvals	GLC Spoil Manager	GLC Project Director
F	7/11/2022	Updates following Site Auditor and SM Review	GLC Approvals Manager	GLC Project Director
G	15/11/2023	Annual review and inclusion of SOP scope	GLC Snr Approvals Advisor	GLC Project Director
H	22/04/2024	Update in response to SM/ER Comments + additional spoil removal (not excavation) at SOP	GLC Snr Approvals Advisor	GLC Project Director

## Terms and Definitions

Acronym	Full Term
ACM	Asbestos Containing Material
ASS	Acidic Sulfate Soil
CEMF	Construction Environmental Management Framework
CEMP	Construction Environmental Management Plan
CoR	Chain of Responsibility
DPHI	Department of Planning Housing and Infrastructure (NSW) (Formerly DPE)
DSI	Detailed Site Investigation
EA	Environmental Advisor
ECM	Environmental Control Map
EIS	Environmental Impact Statement
EM/ESM	Environmental Manager/Environment and Sustainability Manager
EMS	Environmental Management System
ENM	Excavated Natural Material
EPA	Environmental Protection Authority
EPBC	Environmental Protection and Biodiversity Conservation Act 1999
EPL	Environmental Protection License
ER	Environmental Representative
GLC	Gamuda Australia – Laing O'Rourke Consortium
GSW	General Solid Waste
HSW	Hazardous Solid Waste
LAW	Local Area Works
MCoA	Ministers Condition of Approval
MSF	Maintenance and Stabling Facility
NATA	National Association of Testing Authorities
OOHW	Out of Hours Works
PASS	Potential Acidic Sulfate Soil
PM	Project Manager
POEO	Protection of the Environment Operations Act 1997 (NSW)
RAP	Remediation Action Plan
REMM	Revised Environmental Mitigation Measures
RRE	Resource Recovery Exemptions
RRO	Resource Recovery Order
RSW	Restricted Solid Waste
SAQP	Sampling and Analysis Quality Plans
SCC	Specific Contaminant Concentration
SOP	Sydney Olympic Park
SOPA	Sydney Olympic Park Authority

Acronym	Full Term
SPMP	Spoil Management Plan
TBM	Tunnel Boring Machine
TCLP	Toxicity Characteristic Leaching Procedure
UHF	Ultra-High Frequency
VENM	Virgin Excavated Natural Material
WTP	Sydney Metro West – Western Tunnelling Package

# 1 INTRODUCTION

## 1.1 Project Description

The scope of the work being undertaken under the Sydney Metro West Western Tunnelling Package works (WTP) (the Project) includes but is not limited to, the following:

- Westmead Station box excavation, including temporary support, stub tunnels, partially mined station cavern and crossover cavern including permanent lining and support
- Parramatta Station, including excavation of station box and associated support
- Clyde Maintenance and Stabling Facility (MSF), including permanent dive structure, portal, spur running tunnels, spur tunnel junction cavern, bulk earthworks, civil structures, utilities corridor, road crossing and creek diversion
- Rosehill Services Facility, including shaft excavation, permanent lining and lateral support
- A precast segment manufacturing facility at Eastern Creek
- Demolition and site clearance works
- Tunnelling between Sydney Olympic Park (SOP) and Westmead. Tunnelling will be undertaken by placing the tunnel boring machines (TBMs) at the Rosehill Services Facility box and retrieved out at the SOP Station Box and then placed back at the Rosehill Services Facility and retrieved at the Westmead Station Box. Within SOP, some station box works would be required for site establishment, TBM retrieval and spoil load out to facilitate cross passage construction. These activities would include crane set up and operations, plant and material deliveries, spoil load out, and concreting.

Refer to Figure 1 for the location of the WTP project.



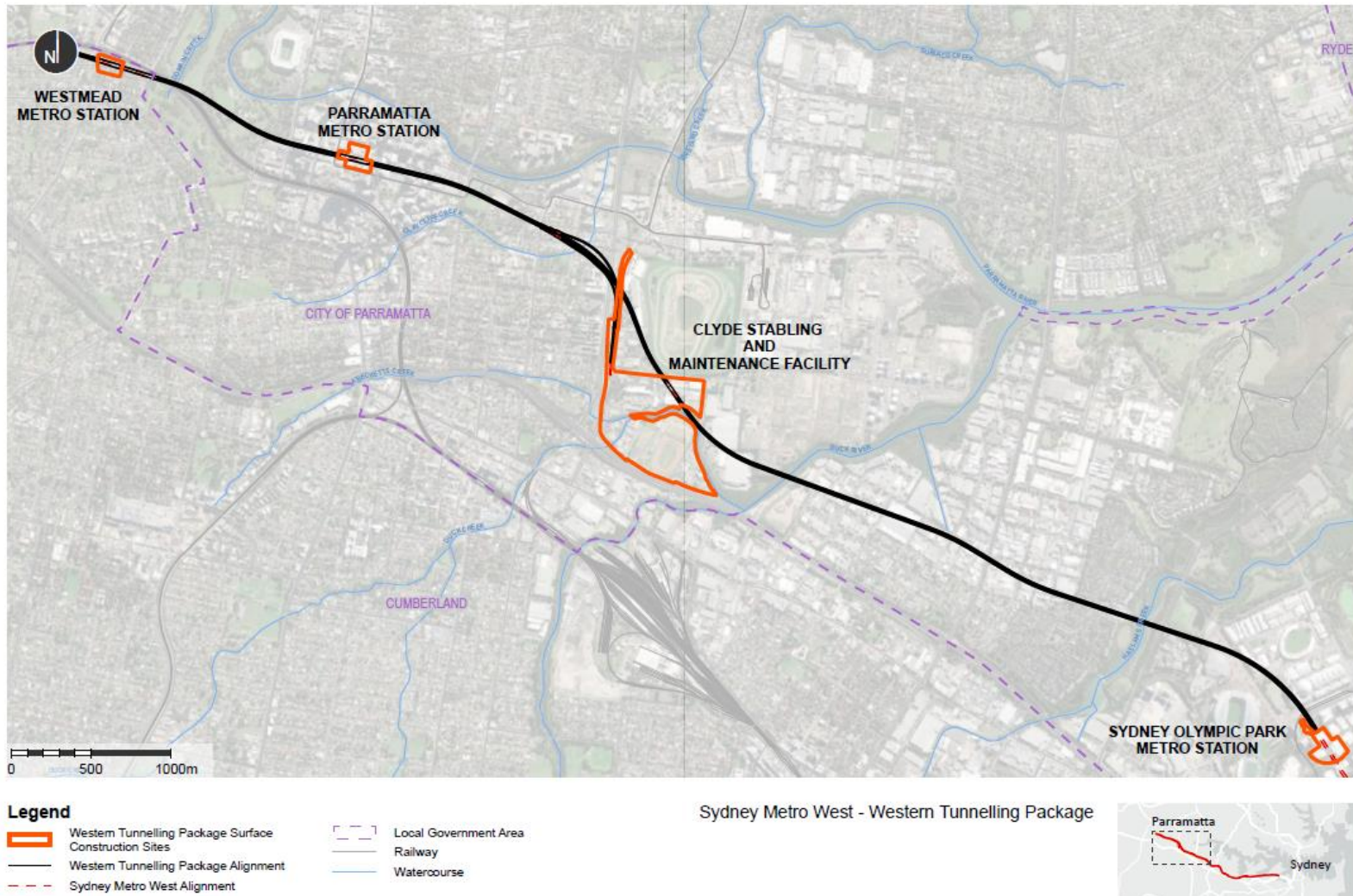


Figure 1: WTP Project Location

## 1.2 Context

The Construction Environmental Management Plan (CEMP) and sub-plans have been developed for the delivery of the WTP. It will be delivered by Gamuda Engineering (Australia) and Laing O'Rourke Consortium (GLC). This Spoil Management Plan (SPMP) forms part of the CEMP (SMWSTWTP-GLO-1NL-EV-PLN-000001).

Sydney Metro West – Westmead to The Bays Concept and Stage 1 received planning approval on 11 March 2021 (SSI 10038). The Project comprises the WTP, which is the western portion of Stage 1 of SSI 10038, from Sydney Olympic Park to Westmead. This SPMP has been prepared to address requirements of the Minister's Conditions of Approval (MCoA) and any modifications to the MCoA, Revised Environmental Management Measures (REMMs) listed in the Sydney Metro West – Submissions Report, dated 20 November 2020, the Construction Environmental Management Framework (CEMF) requirements and all applicable legislation as they relate to the Project.

## 1.3 Environmental Management System Overview

The Project CEMP is the primary Environmental Management System (EMS) document for the delivery of the proposed works. This SPMP is one of a suite of aspect-specific support plans that have been prepared to support the CEMP. An overview of the EMS is provided in the CEMP (Section 4).

Key interactions for this sub-plan with other management plans in the EMS include:

- Site Establishment Management Sub-plan (Rosehill)
- Soil and Water Management Sub-plan
- Air Quality Management Sub-plan
- Visual Amenity Management Sub-plan
- Noise and Vibration Management Sub-plan
- Groundwater Management Sub-plan
- Heritage Management Sub-plan
- Waste Management Sub-plan – to address requirements relating to waste
- Chain of Responsibility (CoR) Management Sub-plan
- Construction Traffic Management Sub-Plan
- Sustainability Management Plan
- Community Communication Strategy.

## 1.4 Consultation Requirements

In accordance with MCoA's C5 and D84, this SPMP has been prepared in consultation with:

- Sydney Olympic Park Authority (SOPA) (in respect of Sydney Olympic Park)
- City of Parramatta Council
- Cumberland City Council.

Consultation was undertaken over a 21-day period, commencing on 5 April 2022 with the submission of the SPMP. The Consultation approach was applied across all plans and stakeholders and included issuing of the document to stakeholders accompanied by an introductory workshop. Following receipt of comments two weeks later, an offer was made to hold a comment review workshop to discuss and close comments directly with the stakeholder the following week. A second workshop would also be made available should there be any outstanding or technical issues requiring further discussion.

An introductory meeting was held on 31 March with City of Parramatta Council, 1 April with SOPA and 7 April with Cumberland City Council, which was organised by Sydney Metro and delivered by GLC. At the introductory meeting, GLC introduced themselves, the project team and outlined the scope of the WTP. The consultation approach was presented, and feedback invited on that approach. No issues were raised on the consultation approach during the introductory meetings.

None of the stakeholders took the offer of a comment review workshop in relation to their review of this SPMP.

Details of issues raised by stakeholders during consultation is provided in Attachment 2, including copies of correspondence in accordance with MCoA A6. SOPA provided comments on 5 April 2022, which was outside the 21-day consultation period. These comments were addressed in revision E of the SPMP. Further consultation details are provided in Attachment 2. The approach to consultation is further outlined in the CEMP.

## 1.5 Certification and Approval

Sydney Metro West – Westmead to The Bays Concept and Stage 1 was subject to environmental impact assessment under the NSW Environmental Planning and Assessment Act 1979 (EP&A Act). It was also declared a Critical State Significant Infrastructure (CSSI) by the Minister for Planning & Public Spaces (the Minister).

An Environmental Impact Statement (EIS) has been prepared under Division 5.2 of the EP&A Act and in accordance with Part 3 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000. Following exhibition of the EIS, an Amendment Report and Submissions Report were also prepared. After an assessment was carried out, the Minister determined that the Sydney Metro West – Stage 1 would be approved subject to conditions.

- Modification 1 of the Project Approval, which sought to amend Conditions of Approval A11d, C10 and D25 and propose a new Condition A39.1, was approved on 28 July 2021.
- Modification 2 of the Project Approval, relating to the relocation and extension of the Rosehill dive structure and realignment of Kay Street and Unwin Street, was approved on the 3 June 2022.
- Modification 3 of the Project Approval, to amend Conditions of Approval C-B10, D10, D11, D18, D37, D63 and D66, was approved on the 4 July 2022.
- Modification 4 of the Project Approval, which sought to amend Conditions of Approval D26 and D122, was approved on 23 December 2022.
- Modification 5 of the Project Approval sought an administrative change to the total amount of Plant Community Type 920 (PCT 920) that could be removed, increasing the clearing limit by an additional 0.40 ha. This Modification also sought to amend Conditions of Approval D4, D6 and add D6A and D6BIt was approved on 20 September 2023.

The planning approval (Infrastructure Approval SSI 10038) and related environmental assessment documents are located at: <https://www.planningportal.nsw.gov.au/major-projects/project/25631>.

Revision D of this SPMP was approved by the Planning Secretary (DPE) on the 11 July 2022 following ER endorsement on 18 May 2022. This SPMP was submitted to the the Planning Secretary for approval on 18 May 2022, no later than one (1) month before the commencement of construction which occurred on 19 July 2022 f.

This SPMP, as submitted to the ER and DPE, including any minor amendments endorsed by the ER, will be implemented for the duration of construction.

INTEGRATED MANAGEMENT SYSTEM  
SPOIL PROJECT MANAGEMENT PLAN  
SYDNEY METRO WEST – WESTERN TUNNELLING PACKAGE

## 2 PURPOSE AND SCOPE

### 2.1 Purpose

The purpose of this SPMP is to describe the spoil management approach that will be employed by GLC employees and its subcontractors during construction of the Project. This sub-plan forms an integral part of the Project's CEMP and GLC's EMS. It applies to all works associated with Project works and establishes the environmental management controls to be implemented by GLC employees and its subcontractors.

This SPMP will address the spoil management requirements of the:

- Sydney Metro Construction Environmental Management Framework (CEMF)
- Minister for Planning and Public Space's Conditions of Approval for the Project (MCoA)
- Revised Environmental Mitigation Measures (REMMs)
- SSI Modifications – Modification 1 Administrative Modification
- SSI Modifications – Modification 2 Clyde Stabling and Maintenance Facility
- SSI Modifications – Modification 3 Administrative Modification
- SSI Modifications – Modification 4 Administrative Modification
- SSI Modifications – Modification 5 Administrative Modification
- Infrastructure Sustainability Council (ISC) Infrastructure Sustainability (IS) rating tool.

### 2.2 Scope

This sub-plan outlines the mitigation and management measures that GLC will use to address potential spoil related impacts during construction of the Project, while complying with relevant approval, statutory and contract requirements.

This Plan addresses the handling and management of spoil. Should disposal of spoil be deemed necessary, it will be managed in accordance with the Waste Management Plan which should be read in conjunction with this SPMP. Additionally, waste reuse, recovery and disposal of all other waste is also addressed by the Waste Management Plan (WMP). Contaminated spoil designated for remediation, offsite reuse or disposal will be managed in accordance with the relevant Remedial Action Plan (RAP), which is also discussed in the Soil and Water Management Plan (SWMP).

Specifically, this sub-plan addresses environmental aspects and impacts that relate to:

- Unlawful disposal of spoil
- Erosion and sedimentation
- Contamination and cross-contamination
  - Contaminated spoil stockpile management principles are detailed in this plan.
  - General spoil stockpile management principles are detailed in the SWMP.
- Noise and vibration from haulage
- Failure to identify reuse opportunities
- Failure to identify spoil reduction opportunities
- Traffic impacts from spoil haulage.



## 3 OBJECTIVES AND TARGETS

The key objectives of the SPMP are to ensure that impacts related to spoil management are minimised and are within the scope permitted by the MCoA. To achieve these objectives, the targets in Table 1 have been established for the management of spoil management impacts during the Project construction.

Table 1: Spoil management targets and performance criteria

Objective	Targets	Performance Indicators
Minimise spoil generation where possible	Limiting spoil generating activities Efficient construction practices	Waste Tracking Register Validation Reports Survey Modelling Regular audits & inspections
Compliance with the MCoA, REMMs, CEMF requirements and relevant legislation as it applies to the Project	Full compliance	Compliance Reporting
100% Reuse or recycling (on or off-site) of Usable spoil	100% Beneficial reuse of usable spoil within bulk fill areas i.e., Clyde MSF 100% Beneficial reuse of usable spoil within environmental and/or development sites	Waste Tracking Register Validation Reports Material Classification Reports
Minimising adverse traffic and transport related issues when transporting spoil	Not exceed limitations set out in the EIS and Noise & Vibration assessments Zero traffic related incidents or complaints	GPS Tracking Incident Report Complaints Register Compliance Reporting
Spoil managed to avoid contamination of land or water	Not exceed limitations set out in the EIS & SWMP & applicable RAP's Zero contamination related incidents	Regular audits & inspections Incident Report Compliance Reporting Site Audit Report
Spoil managed with consideration of the impacts to residents and other sensitive receivers	Minimise impact to sensitive receivers Zero complaints received by nearby land owners	Complaints Register Compliance Reporting Regular audits & inspections Incident Report
Site contamination managed to limit potential risk to human health and the environment	Not exceed limitations set out in the EIS & SWMP & applicable RAP's	Validation Report Site Audit Report Complaints Register Compliance Reporting
Spoil generated during the construction is effectively stored, handled, treated (if necessary), reused, and/or disposed of	Minimise impact to environmental values	Safe work practices & procedures Validation Report

Objective	Targets	Performance Indicators
lawfully and in a manner that protects environmental values.		Site Audit Report Compliance Reporting
Ensure project personnel are aware and competent in their responsibilities in relation to the management of spoil	100% of project personnel aware of responsibilities under the CEMF and this SPMP	Project induction and training register Compliance Reporting

### 3.1 Reuse and Recycling Targets

Spoil production will account for most of the surplus material produced from the Project, with close to 864,800m<sup>3</sup> of surplus material requiring offsite reuse. Whilst the Clyde Maintenance and Stabling Facility (MSF) has the potential to retain a large quantum of spoil, offsite reuse will still be necessary. Assuming contaminated material can be retained and reused in the Clyde MSF, the bulk of surplus material is expected to be classified as Virgin Excavated Natural Material (VENM) / Excavated Natural Material (ENM).

Spoil will be reused onsite, or offsite at another construction site, wherever possible. This will reduce the environmental impacts associated with the transport and disposal of spoil, including traffic, noise, water and air pollution.

To manage spoil throughout the lifecycle of the Project, GLC have established a series of waste recycling targets aimed at furthering the beneficial reuse targets. Table 2 provides detail around each of the nominated waste streams and their respective targeted reuse strategies.

Existing Resource Recovery Orders/Exemptions (RRO/RRE) may be used in conjunction with project specific exemptions upon submission and approval from the EPA. GLC plan on seeking additional exemptions during the delivery phase namely around Tunnel spoil that may have small traces of shotcrete and Potential Acidic Sulfate Soil (PASS) / Acidic Sulfate Soil (ASS) for use within development sites.

Table 2: Waste Stream Reuse & Recycling Targets

Waste Stream	Waste Classification	Disposal Method	Target Reuse/Recovery
VENM/ENM	VENM or ENM (where disposed off-site to a non-licensed facility in accordance with relevant RRO).	Reuse onsite, Clyde MSF Lower and Upper General Fill, Structural Fill Offsite reuse by way of RRO/RRE Offsite Reuse by way of Section 143 (S143) Offsite reuse at an approved facility	100%
Soils without a RRO/RRE	Should material be designated for offsite removal; prior classification will be carried out in accordance with EPA Waste	Onsite remediation and reuse; Clyde MSF Lower and Upper General Fill Offsite reuse by way of RRO/RRE	100% that is permitted to be beneficially reused in accordance with Project Specifications, Remediation Action

Waste Stream	Waste Classification	Disposal Method	Target Reuse/Recovery
	Classification Guidelines Parts 1 & 2 (EPA, 2014)	Offsite reuse at an approved facility	Plan (RAP), Legislation, and relevant Guidelines
PASS/ASS	Should material be designated for offsite removal; prior classification will be carried out in accordance with EPA Waste Classification Guidelines Parts 1 & 2 (EPA, 2014)	Onsite remediation and reuse; Clyde MSF Lower and Upper General Fill Offsite reuse by way of RRO/RRE Offsite reuse at an approved facility	100% that is permitted to be beneficially reused in accordance with Project Specifications, RAP, Legislation, and relevant Guidelines

### 3.2 IS Rating Tool Targets

GLC's approach to managing spoil also includes the IS rating tool requirements for waste management. GLC's targets and measurement tools are detailed in Table 3.

Table 3: IS Rating Tool Targets applicable to spoil management

Objective	Targets	Measurement Tools
Meet IS rating tool requirements and objectives applicable to spoil management detailed in the Sustainability Management Plan	Level 2 for credit IS Was-1 'Waste Management', demonstrating that predictions of waste quantities and types have been developed for construction and operation whilst measures to minimise wastes have been implemented along with monitoring, waste management, and waste handling have been audited and reviewed at appropriate intervals. Level 3 for credit IS Was-2 'Diversion from landfill', demonstrating a diversion of 100% of spoil volume, >90% of inert and non-hazardous waste volume, and >60% of office waste material volume.	Waste Monitoring Records and Reports Review/audit reports



## 4 ENVIRONMENTAL REQUIREMENTS

### 4.1 Legislation and Regulations

GLC obligations include satisfying the requirements and complying with the provisions of the relevant legislation, guidelines, and policies, as well as international and Sydney Metro’s standards. Details are provided in Table 4.

Table 4: Relevant legislation to the Project

Legislation	<p><i>Environmental Planning and Assessment Act 1979</i>  <i>Protection of the Environment Operations Act 1997</i>  <i>Protection of the Environment Operations (General) Regulation 2009</i>  <i>Protection of the Environment Operations (Waste) Regulation 2014</i>  <i>Waste Avoidance and Resource Recovery Act 2001 (WARR Act)</i></p>
Standards	<p>AS2601:1991 Demolition of Structures                  AS 4361.2 2017 Part 2: Lead Paint Management in residential, public and commercial buildings</p>
Guidelines and Specifications	<p>Best Practice Waste Reduction Guidelines for the Construction and Demolition Industry (Tools for Practice), Natural Heritage Trust, 2000                  Waste Classification Guidelines, EPA Publication, 2014                  National Environmental Protection (Assessment of Site Contamination) Measure, 1999 (NEPM), as amended 2013                  Waste Avoidance and Resources Recovery Strategy, DECC, 2007 (WARR Act)                  Waste Classification Guidelines – Part 1: Classifying Waste, EPA 2014                  Addendum to the Waste Classification Guidelines – Part 1: Classifying Waste, EPA 2016                  The Extracted Natural Material Order 2014, EPA 2014</p>

#### 4.1.1 New South Wales Waste Strategy

The NSW Waste Avoidance and Recovery Strategy defines a hierarchy aimed at minimising the impact of waste disposal including that of Spoil and promoting efficient resource use. GLC will incorporate these objectives in the management of spoil associated with the Project. The hierarchy is shown below in Figure 2. Section 1 outlines GLCs approach to prioritising avoidance and reduction and the reuse of spoil as shown in the top two levels of the hierarchy.

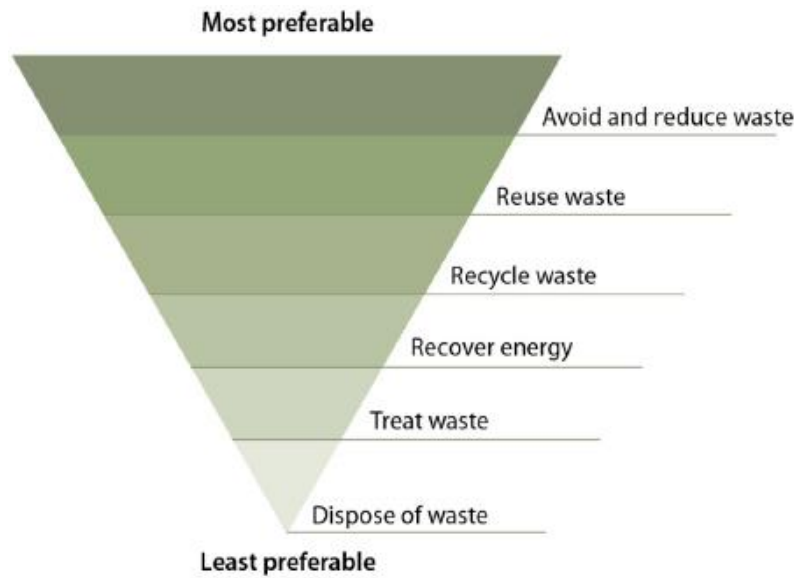


Figure 2: Waste Hierarchy

## 4.2 Approvals, Licenses and Permits

This SPMP has been developed to satisfy the requirements of MCoA C1. A full list of applicable MCoAs, REMMs, CEMF requirements and EPL condition requirements is provided in Attachment 1.

Other legislation relevant to this SPMP is included in Attachment 2 of the CEMP.

## 4.3 IS Rating Tools Requirements

This SPMP shows how we will achieve the following ISv1.2 credits in Table 5.

Table 5: IS rating tool requirements applicable to spoil management

ID	IS Rating Tool Requirement	Document Reference
Was-1 L1	<ul style="list-style-type: none"> <li>Predictions for waste quantities and types have been developed for construction and operation</li> <li>Measures to minimise waste during construction and operation have been identified and implemented</li> <li>Monitoring of all wastes is undertaken during construction</li> </ul>	Section 5.2 Section 7.1
Was-1 L2	<ul style="list-style-type: none"> <li>Requirements for L1 are achieved.</li> <li>Waste monitoring and management has been managed, reviewed, or audited by a suitably qualified professional.</li> <li>Waste handling and disposal/recycling all the way to final destination has been audited at appropriate intervals</li> </ul>	Section 8.4
Was-2 L1	<ul style="list-style-type: none"> <li>70 to &lt;80% of spoil volume diverted</li> <li>25 to &lt;50% of volume of inert and non-hazardous waste diverted</li> <li>25 to &lt;40% by volume of office waste material diverted</li> </ul>	Section 8.3
Was-2 L2	<ul style="list-style-type: none"> <li>80 to &lt;100% of spoil volume diverted</li> </ul>	Section 8.3

ID	IS Rating Tool Requirement	Document Reference
	<ul style="list-style-type: none"> <li>● 50 to 90% of by volume of inert and non-hazardous waste diverted</li> <li>● 40 to 60% by volume of office waste material diverted</li> </ul>	
Was-2 L3	<ul style="list-style-type: none"> <li>● 100% by volume of spoil diverted</li> <li>● &gt;90% by volume of inert and non-hazardous waste diverted</li> <li>● &gt;60% by volume of office waste material diverted</li> </ul>	Section 8.3

## 5 EXISTING ENVIRONMENT

The currently known spoil and waste associated with the Project have been provided in the Sydney Metro West Stage 1 EIS (Chapter 24), and geotechnical and contamination assessments within relevant Addendums.

Clyde MSF has been broken into a number of zones to allow assessment and site auditor sign off of different areas at different times. Each of these zones will be subject to the process defined below and assessed as individual sites. These zones have been approved between Sydney Metro and GLC and are generally based on site access dates, which differ across the Clyde MSF.

### 5.1 Classification

All spoil that requires reuse (other than material determined as part of a RRE) or disposal will be classified in accordance with the Waste Classification Guidelines: Part 1 Classifying Waste (NSW EPA 2014). Reference will also be made to Part 4: Acid sulfate soils, where relevant. Classification of all spoil material generated for the Project will be carried out in accordance with the GLC Waste Management Plan (WMP). All spoil generated will be subject to waste classification (whether it is General Solid Waste (GSW), Special Waste, Restricted Waste (RSW) or Hazardous Waste), including VENM and an RRO/RRE (e.g. ENM) and these will be collated to enable Site Audits to be completed.

Per the requirements of the MCoAs and REMM's, detailed site investigations (DSI) are being at each of the relevant sites, inclusive of an assessment of materials for waste classification purposes. Sampling and Analysis Quality Plans (SAQPs) were prepared to provide a detailed plan of all fieldwork, including fieldwork procedures and methodology, quality assurance and quality control measures, and OH&S procedures, to be used as part of the DSI. These works were completed prior to construction that would result in disturbance of moderate to high risk contaminated sites. At the point of this Revised Spoil Management Plan, the following DSIs have been obtained:

- Westmead metro station construction site (1 DSI)
- Parramatta metro station construction (1 DSI)
- Clyde MSF construction site (8 DSI's).

Sampling and testing will be undertaken in accordance with section 105 of *Contaminated Land Management Act 1997* (NSW), which will be summarised in a validation report. The validation report will be approved by an EPA-accredited Site Auditor.

In instances where material is designated for offsite reuse or disposal, in-situ waste classification will be utilised as often as practicable to help minimise the need for stockpiling of materials. This form of classification aides in limiting the disturbance and potential exposure to contaminants where sensitive receivers and human health factors could be impacted.

Where remediation is required to make land suitable for the final intended land use, a Remedial Action Plan (RAP) will be prepared and approved by appropriately certified consultants. The process for developing a RAP is detailed in the SWMP.

Before commencing remediation, a Section B Site Audit Statement(s) will be prepared by an NSW EPA-accredited Site Auditor and approved that the RAPs are appropriate and that the site can be made suitable for the proposed use. Validation report(s) will be prepared in accordance with Consultants Reporting on Contaminated Land: Contaminated Land Guidelines (EPA, 2020) and relevant guidelines made or approved under section 105 of the Contaminated Land Management Act

1997 (NSW). A Section A1 or Section A2 Site Audit Statement and Site Audit Report, which state that the contaminated land disturbed by the work has been made suitable for the intended land use, will be submitted to the Planning Secretary and the Local Councils after remediation and before the commencement of operation of the Project, except as otherwise approved through MCoA A9 A copy of DSI, RAPs, validation reports, Site Audit Reports and Site Audit Statement(s) must be submitted to the Planning Secretary, and Local Councils for information and displayed on the project website in accordance with MCoA B11.

Unexpected Contaminated Land and Asbestos Finds Procedure will be implemented to manage unexpected contamination, soil discoloration, offensive odours, buried waste or Asbestos Containing Material (ACM), refer to Attachment 4 of the SWMP. Training in this procedure will be provided to all workforce and staff involved in excavation.

### 5.1.1 Virgin Excavated Natural Material

Under Schedule 1 of the POEO Act, VENM is naturally occurring material like clay, sand, rock or soil where it has been excavated or quarried from areas that are not contaminated with manufactured chemicals, or with process residues, as a result of industrial, commercial, mining or agricultural activities. This material does not contain sulfidic ores or soils or any other waste.

Most of the tunnel spoil is expected to be classified as VENM, box excavations below rock are also expected to be classified as VENM.

It is noted that potential classification of spoil as VENM will be dependent on whether potential acid sulfate soil (PASS) is present at the location and must be confirmed for each area. PASS cannot be classified as VENM.

### 5.1.2 Excavated Natural Material

Should spoil not meet the VENM criteria, the material will be tested to determine if it can be classed as ENM. ENM under the POEO Act is defined as material that has been excavated from the ground, contains at least 98% natural material by weight and does not meet the definition of VENM.

ENM does not include material that has been processed or contains acid sulphate soils or potential acid sulphate soils. Parts of the box excavations as well as some minor areas within the Dive area at the Clyde MSF may meet ENM criteria.

Material classified as ENM must meet the definition and testing requirements for ENM as provided in the ENM Order 2014.

### 5.1.3 Other Classifications

Any spoil that is not classified as either VENM or ENM may be classed as GSW, RSW, Special Waste or Hazardous Waste in accordance with the Waste Classification Guidelines: Part 1 Classifying Waste (EPA 2014). Refer to the WMP for the process for classifying waste and spoil.

Currently, no wastes have been pre-classified by the EPA as 'restricted solid waste'. Therefore, the spoil needs to be chemically assessed to determine whether it is Restricted Waste.

Special Waste has unique regulatory requirements because of the potential harm to the environment and human health. Special Waste has been pre-classified by the EPA and includes clinical and related waste, asbestos, waste tyres and anything classified as a special waste under an EPA gazettal notice.

Like Special Waste, Hazardous Waste has been pre-classified by the EPA and is waste other than special or liquid waste with the following characteristics:

- Containers, having previously contained a substance of Class 1, 3, 4, 5 or 8 within the meaning of the Transport of Dangerous Goods Code, or a substance to which Division 6.1 of the Transport of Dangerous Goods Code applies, from which residues have not been removed by washing or vacuuming.
- Coal tar or coal tar pitch waste comprising of more than 1% by weight of coal tar or coal tar pitch waste
- Lead-acid or nickel-cadmium batteries
- Lead paint waste
- Any mixture of the wastes referred above.

General Solid Waste (non-putrescible) is any wastes not classified as special, liquid, hazardous, restricted, or general solid waste (putrescible) and includes ASS.

It is expected that the Clyde MSF will produce all these waste types, therefore the management of any contaminated spoil will be in accordance with the relevant RAP, SWMP and WMP. Classification of demolition waste is also discussed in the WMP.

The findings of the DSI will determine the process for identifying and classifying recyclable GSW (GSW-R). It is noted that while GSW-R is not a classification provided by the NSW EPA Waste Classification Guidelines, specific waste receiving facilities may accept waste other than the waste types determined in NSW EPA 2014 based on their EPL.

## 5.2 Anticipated Spoil Volume

The Project works will generate a total cut volume of approximately 1.38 million m<sup>3</sup> of spoil within the tunnel and seven sites located along the Project alignment. While accurate quantification of material classification can only occur post the DSI phase, conservative estimates indicate 251,716m<sup>3</sup> is expected to be non-VENM or ENM.

Table 6: Anticipated spoil volume

Project Site	VENM/ENM (m <sup>3</sup> )	Non-VENM/ENM (m <sup>3</sup> )
Sydney Olympic Park (SOP)*	0*	0*
	Rosehill (TBM)	649,810
	Clyde MSF	0
Clyde Stabling and Maintenance Facility	Dive & Spur Lines at Clyde MSF	123,473
		23,498
Parramatta	120,000	40,000
Westmead	205,139	5,692
<b>Total</b>	<b>1,098,422</b>	<b>251,716</b>

\* Negligible excavated material expected to be generated during tunnel breakthrough and nozzle construction.

Some material from cross passage excavation (accounted for under TBM spoil volume) will be removed via truck and dog from SOP, and or via Rose Hill during the TBM relaunch (whichever comes first). Some material would stockpiled at SOP.

## 6 ASPECTS AND IMPACTS

### 6.1 Construction Activities

The Project will involve a range of construction activities incorporating various heavy machinery, plant and equipment that will operate in several locations. To assess the level of potential spoil-related impact, the broad categories of construction activity likely to have an impact are identified below in Table 7.

Table 7: Construction Activities Generating Spoil

Construction Activity	Description
Site Establishment	<p>This involves demolition of existing buildings, vegetation clearing, erection of hoarding and relocation, adjustment and protection of utilities and compound establishment.</p> <p>Waste generated from this activity would include demolition waste, green waste and spoil from compound establishment works.</p>
Piling	<p>Piling is required for foundations of structures and as perimeter linings of box excavations. Bored piling will be used rather than impact piling. A minor volume of spoil material would be generated from this activity.</p>
Diaphragm wall	<p>Diaphragm walls are typically constructed in areas of potentially soft/weak and permeable soil/rock at substantial depths. A diaphragm wall is a reinforced concrete structure constructed in-situ, panel by panel. They are constructed under a support fluid usually a Bentonite slurry or polymer and are excavated using mechanical methods including rope clam shell grabs or hydraulic clam shell grabs for example.</p>
Surface Construction	<p>Civil works and surface structures include roads, bulk filling, hardstand areas, water treatment facilities and site offices.</p>
Tunnelling/Excavation	<p>Mainline tunnelling, boxes, cross passages, nozzles, and shafts. Spoil will be removed from Project Sites by trucks sized appropriately in consideration of traffic route, receipt site, material type and site access restrictions.</p>
Spoil & Material Transport	<p>Spoil will be transported from Project Sites by licenced contractors, to licenced facilities or other Projects lawfully able to accept spoil. Spoil will only be transported during CoA Approved hours.</p>
Construction of Realigned Creeks	<p>This involves realignment of Duck Creek / A'Beckett Creek at Clyde MSF. A minor volume of spoil material would be generated from this activity.</p>



## 6.2 Impacts

The excavation and handling of spoil provides opportunities for environmental risks associated with contamination, waste, soil, and water impacts. Aspects and the potential for impacts related to these issues have been considered in a risk assessment in Attachment 4 of the CEMP and include:

- Unlawful disposal of spoil
- Erosion and sedimentation
- Contamination and cross-contamination
- Noise and vibration from haulage
- Failure to identify reuse opportunities
- Failure to identify spoil reduction opportunities
- Traffic impacts from spoil haulage.

Potential spoil management impacts specific to each construction site are described in Table 8.

Table 8: Summary of potential impacts within the Project construction sites

Location	Potential Impacts
Sydney Olympic Park Metro Station	<ul style="list-style-type: none"> <li>• Improper management of potentially contaminated spoil</li> <li>• Dust dispersion from improper stockpiling management</li> <li>• Incorrect disposal of spoil</li> </ul>
Clyde MSF	<ul style="list-style-type: none"> <li>• Improper management of contaminated spoil</li> <li>• Dust dispersion from improper stockpiling management</li> <li>• Contaminated spoil dispersion into nearby waterways</li> <li>• Incorrect disposal of spoil</li> </ul>
Parramatta Metro Station	<ul style="list-style-type: none"> <li>• Improper management of contaminated spoil</li> <li>• Traffic impacts from spoil haulage</li> <li>• Dust dispersion from improper stockpiling management</li> <li>• Noise and vibration impacts from spoil haulage</li> <li>• Incorrect disposal of spoil</li> </ul>
Westmead Metro Station	<ul style="list-style-type: none"> <li>• Improper management of contaminated spoil</li> <li>• Traffic impacts from spoil haulage</li> <li>• Visual amenity impacts from spoil stockpiling</li> <li>• Dust dispersion from improper stockpiling management</li> <li>• Noise and vibration impacts from spoil haulage</li> <li>• Incorrect disposal of spoil</li> </ul>

Section 7.1 outlines the mitigation and management measures to be implemented to avoid or minimise potential impacts as a result of spoil management during construction of the Project.



## 7 ENVIRONMENTAL MITIGATION AND MANAGEMENT MEASURES

Measures to manage spoil and reduce the risk of impacts will be implemented throughout the Project.

### 7.1 Standard Mitigation and Management Measures

Specific measures and requirements to meet the objectives of this Plan and to address spoil management-related impacts are outlined in Table 8. These measures have been developed in line with the requirements in the EIS and Amendment Report. As a minimum, the following will be incorporated at each construction site and documented on the Environmental Controls Map (ECM) in Attachment 8 of the CEMP, where applicable. Note, the management of stockpiles are detailed within the SWMP (in relation to non-contaminated material) and the SpMP (in relation to contaminated spoil). The ERSED Control mitigation and management measures for all stockpile types however, remain relevant and are detailed in both plans.

Table 9: Environmental Mitigation and Management Measures

Item	Mitigation and Management Measure and Project site requirements	Responsibility	Timing	Reference
SEA – Senior Environmental Advisor, EA – Environmental Advisor, CM – Construction Manager, SS – Site Supervisor, Traffic Manager – TM, SM - Spoil Manager				
1.	All staff and Subcontractors will participate in a Project induction and ongoing toolbox talks that will describe waste minimisation and reuse management measures, including the requirements of the waste management hierarchy	EA/SEA/SS	Pre-construction/ construction	Best Practice
2.	Specific training packages will be developed to address key personnel responsibilities associated with the management of spoil and waste. For example, the selection and approval of offsite reuse facilities, and truck driver training.	SEA/SM	Pre-construction/ construction	Best Practice
3.	Spoil management measures from this plan will be included in a relevant RAP (refer to the SWMP), which will be developed prior to the commencement of specific activities where there is a residual high risk. Where RAPs are not required for specific construction zones, requirements will be outlined in the zone-specific Material Management Plan.	SEA	Pre-construction/ construction	Best Practice
4.	Detailed construction design will be reviewed to minimise waste generation, for example, the reduction of bulk excavation footprints to reduce solid waste, including the reduction in generation of contaminated materials	SM/SEA/CM	Pre-construction	MCoA D111 CEMF 6.1(a) i.
5.	Forecast spoil generation quantities will be included in detailed construction design. Spoil generation quantities will assist the Project Managers to plan spoil segregation, spoil removal, reuse, and disposal.	SM/SEA/CM	Detailed Design	Best Practice
6.	Site-specific Sampling and Analysis Quality Plans (SAQPs) will be developed for each surface excavation Project site to inform In-Situ waste classification in accordance with the NSW EPA Waste Classification Guidelines.	SEA/CM	Pre- construction/con struction	MCoA D114 REMM WR2

Item	Mitigation and Management Measure and Project site requirements	Responsibility	Timing	Reference
SEA – Senior Environmental Advisor, EA – Environmental Advisor, CM – Construction Manager, SS – Site Supervisor, Traffic Manager – TM, SM - Spoil Manager				
	Hazardous materials surveys will be completed for buildings and structures suspected of containing hazardous or special waste materials prior to their demolition.			
7.	<p>In-situ waste classifications will be completed for soils to be excavated for surface works and dive structures. As required, volumetric models will be created to inform excavation planning.</p> <p>The SAQPs from the DSI will determine the process for in-situ waste classification, including sampling density, frequency, testing procedure etc.</p> <p>Where required, additional waste classification will be carried out during excavation to assist in in-situ classification verifications and waste segregation and reuse or disposal requirements.</p>	SEA/SM	Pre-construction	MCoA D114
8.	Detailed excavation planning will be completed for applicable Project Sites following in-situ waste classification. This planning will allow targeted removal of contamination based on location and exposure risk, e.g., removal of hotspots to reduce risk of cross contamination.	SEA/CM/SM	Construction	MCoA D111 REMM WR2, WR4 CEMF 6.1(a)vi.
9.	<p>Material encountered during excavation that is inconsistent with the In-situ waste classification will be segregated and stored with adequate environmental controls until the waste classification is completed.</p> <p>The 'Unexpected Contaminated Land and Asbestos Finds Procedure' contained within the SWMP (Attachment 4) will be implemented.</p>	CM/SS/EA	Construction	REMM WR4

Item	Mitigation and Management Measure and Project site requirements	Responsibility	Timing	Reference
SEA – Senior Environmental Advisor, EA – Environmental Advisor, CM – Construction Manager, SS – Site Supervisor, Traffic Manager – TM, SM - Spoil Manager				
10.	All other wastes will be classified in accordance with the NSW EPA Waste Classification Guidelines.	SS/EA	Construction	MCoA D114 REMM WR1
11.	Spoil generated on-site, that requires storage prior to disposal, will be segregated by type and the appropriate environmental controls implemented, as required by the SWMP and SpMP. Stockpiles will be managed to avoid any contamination of land and adjacent waterways.	SS/EA/SM	Construction	REMM WR4 CEMF 6.1(a)iv
12.	All-weather receiving facilities will be prioritised as spoil disposal locations to minimise wet weather delays when removing spoil off-site. This will also reduce the need to stockpile spoil on-site.	SM/SEA/CM	Construction	Best Practice
13.	100% of usable spoil will be reused or recycled (both onsite and off-site). Where necessary the off-site reuse of spoil will be in accordance with either existing, or Project specific resource recovery exemptions/orders.	SS/CM/EA	Construction	MCoA D111 CEMF 6.1(a)ii
14.	The reuse and recycling of materials generated on the Project, where suitable, will be prioritised over disposal at landfill facilities.	SS/CM/EA	Construction	MCoA D111
15.	Waste and spoil will be transported by reputable transport companies, and where required will be suitably licenced for transporting certain types of waste material.	CM/SM/TM	Construction	NSW Legislation
16.	Waste transport vehicles will be fitted with GPS tracking systems.  The locations of all construction spoil haulage vehicles will be monitored in real time via GLC GPS tracking. GPS records will be made available to the EPA and the DPE upon request	CM/SS/SM	Construction	MCoA D83 MCoA D90(e) REMM WR5

Item	Mitigation and Management Measure and Project site requirements	Responsibility	Timing	Reference
SEA – Senior Environmental Advisor, EA – Environmental Advisor, CM – Construction Manager, SS – Site Supervisor, Traffic Manager – TM, SM - Spoil Manager				
17.	100% of Project spoil will be tracked using a waste tracking registers.	EA/SS/SM	Construction	REMM WR5 CEMF 6.2(b)
18.	A spoil disposal permit system will be implemented for the authorisation of spoil and or waste to be disposed of off-site at licensed facilities or to any other place that can lawfully accept such waste.	EA/CM/SM	Construction	MCoA D113
19.	Spoil transport will be completed via approved haul routes only. The use of approved haul routes will be included in haulage contractor subcontracts. Compliance with these requirements will be monitored through the GPS tracking system.	TM/SM	Construction	MCoA D90 (e)
20.	All Heavy Vehicles used for spoil haulage must be clearly marked on the sides and rear with the project name and application number to enable immediate identification by a person viewing the Heavy Vehicle standing 20 metres away.	SS/EA	Construction	MCoA A47
21.	Compliance with the requirements of this SPMP will be included in weekly environmental inspections.	EA/SEA	Construction	CEMF 6.2(b)
22.	The potential impacts from spoil storage and haulage would be managed using the following approaches, where feasible and reasonable: <ul style="list-style-type: none"> <li>● On-site spoil storage capacity would be maximised to reduce the need for truck movements during sensitive times, unless the spoil is contaminated</li> <li>● Vehicle movements would be redirected away from sensitive receiver areas and scheduled during less sensitive times</li> <li>● The speed of vehicles would be limited and the use of engine compression brakes would be avoided</li> <li>● Heavy vehicles would not be permitted to idle near sensitive receivers.</li> </ul>	CM/SM/SS/EA /TM	Construction	REMM NV14

Item	Mitigation and Management Measure and Project site requirements	Responsibility	Timing	Reference
SEA – Senior Environmental Advisor, EA – Environmental Advisor, CM – Construction Manager, SS – Site Supervisor, Traffic Manager – TM, SM - Spoil Manager				
23.	Opportunities to maximise spoil material removal by non-road methods will be investigated during detailed construction planning.	CM/SEA	Pre-construction	MCoA D99
24.	Detailed Site Investigations (DSI) will be undertaken to identify the nature of contamination at moderate to high risk contaminated sites, to minimise the mixing of waste streams through waste segregation practices. Following this DSI, detailed construction planning will investigate opportunities to minimise the excavation footprint and reduce the volume of contaminated spoil generated.	CM/SEA	Pre-construction	Best practice
25.	Management of contaminated spoil will be undertaken in accordance with the relevant RAP.	CM/SEA/SM	Construction	Best practice

## 7.2 Spoil Reuse

As discussed in Section 4.1.1, GLC will adopt the objectives of the NSW Waste Avoidance and Recovery Strategy to minimise waste disposal. As a priority, the preferred method will be to 'Avoid and Reduce' waste. This will be regularly assessed throughout the detailed construction planning of the Project. As detailed construction planning progresses, assessments will be undertaken as to the suitability of design parameters and impact upon reuse of spoil. Instances where these parameters clash with reuse objectives will subsequently be flagged for resolution. A similar process will be adopted for the RAP development. Where RAPs are not required for specific construction zones or sites, requirements will be outlined in the zone-specific or site-specific Material Management Plan.

Additionally, GLC will continue to examine opportunities to reuse spoil during construction of the Project. Firstly onsite, within the Project footprint. Secondly, offsite through the pursuit of new Resource Recovery Orders and/or Exemptions, notably for tunnel spoil. This is detailed further in Sections 7.4 and 7.5.

## 7.3 Spoil Stockpiling

General stockpile principles in the form of erosion and sediment control principles are detailed within the SWMP as well as Section 7.3.1 of this plan, however specific stockpile management principles in the context of contaminated material (e.g PASS, Hazardous waste, asbestos etc) are detailed in this Plan.

Short-term stockpiling of spoil will be required at each construction site. Sites have been designed to accommodate this stockpiling requirement. Sites that are space restricted such as Westmead, Parramatta, and the Dive structure at Clyde MSF, are particularly challenging as space also needs to be available for entry/exit points, internal haul roads and site amenities. Emphasis was placed on establishing sites that facilitated the efficient loading and transportation of spoil as well as providing sufficient space to safely store and segregate. These restricted sites can easily become spoil bound and therefore regular removal via Truck & Dog is key. Should delays occur, the Clyde MSF will act as a contingency for short-term stockpiling. In the context of SOP, material load out from cross passage excavation would be required. This spoil would be stockpiled within the station box, however given TBM dismantling would occur simultaneously, stockpiling on the ground surface may be required. In all instances, regular truck and dog movement for spoil removal would be prioritised to minimise the necessity for stockpiling at SOP.

Stockpile management will be designed in such a manner as to maximise space, create contingency for weekend, public holidays, special events and wet weather days. Erosion and Sediment Control Plans (ESCP) will be prepared and implemented in advance of works. The following general principles will also be adopted:

- All stockpiles will be managed in accordance with Managing Urban Stormwater: Soils and construction (Landcom, 2004; "the Blue Book")
- Differing material types will be segregated and identified with signage to avoid cross contamination (details may include stockpile number, source, sampled date, classification etc)
- Erosion and sediment controls will be established between site and drainage lines or down slope areas
- Positioned to minimise visual light spill, noise and vibration impacts to sensitive receivers
- Located in areas that do not impact heritage sites beyond those already impacted
- Not unreasonably affect the land use of adjacent properties.

Contaminated spoil stockpiles will be appropriately bunded to minimise the risk of dispersion into nearby waterways during high rainfall events.

Material and waste tracking will occur to enable verification of appropriate handling and placement of spoil (refer to Attachment 4).

### 7.3.1 Spoil and Other Non-contaminated Stockpiles

The following principals will be adopted for VENM and ENM stockpiles.

Dust odour, erosion and sediment controls will be in place and maintained, including:

- The use of spoil sheds or screens in areas close to buildings or in densely populated areas
- Diversion drains
- Silt barriers
- Dust suppression devices
- Batter slopes to prevent collapse or sliding of material
- Provide sufficient area such that, to the greatest extent practical, deliveries outside of construction hours will be minimised
- Certified designs where deemed appropriate.

During special events at nearby sensitive receivers, including at the Rosehill Gardens Racecourse, consultation will be undertaken with the affected sensitive receiver to manage dust impacts from Project construction works.

### 7.3.2 Contaminated Stockpiles

Contaminated stockpiles are anticipated to be generated for most of the Project construction sites. These materials will be classified once the DSI phase has been completed which will also aid in the development of the relevant RAPs. Guidelines for contaminated spoil stockpiles include:

- Hazard and risk mitigation measures to be implemented, including specific controls on toxic finds, such as the management of hazards with asbestos impacted soils or odorous spoil.
- Where asbestos is identified, a Class A Licenced asbestos removalist contractor, occupational hygienist and air monitoring program will be engaged to manage works in accordance with the Asbestos Management Plan
- Measures for spoil segregation, temporary stockpiling, and containment
- Material and waste tracking will occur to enable verification of appropriate handling and placement of spoil (refer to Attachment 4)
- Controlling run-off with bund, fill shaping as well as separate “clean” water & “dirty” water diversions
- Temporary sediment basins
- Potential for remediation treatment and/or off-site reuse at the licenced disposal facilities
- Testing and approval requirements
- Monitoring, auditing, and reporting requirements.

In-situ waste classification will be utilised as often as practicable to help minimise the need for stockpiling of contaminated materials. Contaminated stockpiles will be managed to minimise the dispersion of contaminated material, through:

- Bunding of contaminated stockpile areas to prevent dispersion into waterways
- Covering stockpiles to minimise dust dispersion from wind



- Uncovered stockpiles must be kept moist to avoid migration by dust
- Stockpiles will be located away from environmentally sensitive receivers.

## 7.4 Onsite Reuse and Retention Opportunities

There is opportunity to reuse substantial amounts of non-VENM or ENM spoil within the fill formation in accordance with the RAP, with Clyde MSF having the capacity to utilise approximately 578,400 m<sup>3</sup> of material.

While not all non-VENM or ENM will be suitable for retention, the lower and upper general fill zones are the most likely locations where reuse of spoil addressed by the RAP can be achieved. Subject to Sydney Metro's approval, GLC considers that the existing MCoA (D111 and D112) and standard EPL conditions provide the opportunity to pursue this strategy.

Additionally, shale and sandstone material (which is likely to be classified as VENM or ENM) generated from the excavation of the tunnel, boxes, caverns, and shafts is likely to be well suited for use in formation fill. The geotechnical properties of the of the Structural fill zones will predominately determine what type of spoil is suitable for reuse, with sandstone material identified as likely being suitable for use. Non-VENM/ENM spoil is not suitable for reuse within Structural zones. Sites like Westmead, Parramatta, Rosehill, and Spur tunnels would be able to supplement the spoil generated by the TBM for use within the bulk fill works. Material and waste tracking will occur to enable verification of appropriate handling and placement of spoil (refer to Attachment 4).

Potential Acid Sulfate Soils uncovered through the delivery of works across the project alignment can also be used as fill material, following handling, storage and neutralisation processes detailed within the Acid Sulphate Soils Work Method Statement (ASSWMS) and the Acid Sulphate Soil Manual (1988). As detailed within clauses 76 and 79 of the Protection of the Environment Operations (Waste) Regulation 2014, GLC will provide information to the EPA for the transport/acceptance of asbestos and tyre waste via the EPA WasteLocate System where:

- Asbestos waste exceeds 100kg, or more than 10m<sup>2</sup> of asbestos sheeting in a single load.
- Tyre waste exceeds 200kg, or 20 or more tyres in a single load

GLC will seek project specific RRO and RRE as needed. As of November 2022, GLC possess one RRO and one RRE respectively, each of which expire in November 2025 unless revoked earlier by the EPA by written notice. The RRO and RRE will permit GLC to utilise suitable excavated material to be applied to land as engineering fill, for use in earthworks, or applied to land within the road corridor for public road related activities including road construction, maintenance and installation of road infrastructure facilities.

## 7.5 Offsite Waste Reuse Opportunities

Onsite reuse of spoil will be prioritised where possible. However, as the Project has a balance cut to fill of approximately 864,800 m<sup>3</sup>, there will be a need to remove spoil offsite. In these instances, the priority will again be given to maximising the reuse of spoil at receipt sites. Development projects provide a great opportunity for this to occur. Receipt sites for spoil generated by the Project will be selected based on proximity to the construction site, where appropriate, to reduce the potential environmental impacts associated with the transport of spoil. Additionally, construction staging requirements will also influence the preference between onsite reuse opportunities and offsite disposal, where time or spatial constraints, for example, may result in onsite reuse not being a practicable option at some stages of construction.

In addition, GLC will take advantage of existing Waste RRO/RRE's to further avoid otherwise unsuitable spoil from being disposed of at landfill sites. Some examples of existing RROs are:

- ENM
- Excavated public road material
- Reclaimed asphalt pavement.

GLC obtained a specific RRO and RRE for Project tunnel spoil in November 2022. Together, the RRO/RRE enables specific tunnel spoil excavated by GLC to be applied to land as engineering fill, for use in earthworks, or applied to land within the road corridor for public road related activities including road construction, maintenance and installation of road infrastructure facilities. Compliance testing will be completed in accordance with the RRO approval to ensure contamination levels remain within the approved levels. Subject to project needs and findings from current and future DSI's undertaken, GLC may pursue new RROs for PASS material to further optimise beneficial reuse.

Several development sites are already identified as being well suited to receiving large quantities of reusable spoil. The Sites Approved to receive reusable spoil at the time of this Management Plan Update (Rev H) include:

- CLMU Pty Ltd
- Load and Go
- WEM Civil
- AWJ Kemps Creek
- CARAS Moorebank
- M12 West
- Nepean Business Park
- Spring Farm Parkway Stage 1 Upgrade
- T&I Civil Fairfield East

Once the characteristics of GSW is identified from the DSI works, opportunities will be investigated for recycling of spoil that is classified as GSW. Several approved licenced facilities will be identified for reuse of GSW-R at specific receiving sites with acceptable Specific Contaminant Concentration (SCC) and Toxicity Characteristic Leaching Procedure (TCLP) results. Samples of spoil will be sent for inspection to determine which receival sites can accept the spoil as GSW-R. This option will be pursued, when possible, to divert waste from landfill. It is noted that while GSW-R is not a classification provided by the NSW EPA Waste Classification Guidelines, specific waste receiving facilities may accept waste other than the waste types determined in NSW EPA 2014 based on their EPL. Sites such as Met Recycling and Aussie Skips have the capability to recycle GSW spoil. GLC will continue to work with market leaders within the waste recovery industry to identify and realise opportunities.

Attachment 5 provides an indicative timeline for the generation of spoil over the course of the Project.

## 7.6 Offsite Disposal of Waste

In instances where spoil cannot be beneficially reused either onsite or offsite, it will be disposed at licensed facilities. Material types disposed would generally include GSW (Putrescible and Non-Putrescible), RSW, HSW, and Special Waste.

Contaminated spoil of various classifications and in varying quantities are expected to be excavated from all project sites and contaminated spoil will be identified as per the process in Section 5.1.

Primary, secondary, and tertiary disposal sites have been identified for each classification of spoil to be disposed, based on tender stage negotiations. Attachment 3 provides further detail on spoil receipt sites likely to be utilised.

Spoil will only be exported to a site licensed by the EPA for the storage, treatment, processing, reprocessing or disposal of the subject waste, or in accordance with an RRE/RRO. Appropriate records and disposal dockets will be retained for audit purposes.

## 7.7 Offsite Material Movement

Material transport will be undertaken in accordance with the relevant Project Requirements. A Chain of Responsibility (CoR) Management Plan and Heavy Vehicle National Law will govern material transport for the Project. Spoil haulage vehicles will utilise designated haulage routes outlined in the EIS or approved in accordance with MCoA D86.

Haulage of spoil may be undertaken outside the following standard hours:

- 7:00am to 6:00pm Mondays to Fridays, inclusive
- 8:00am to 6:00pm Saturdays
- At no time on Sundays or public holidays.

When travelling to and from the Westmead construction site using any roads or streets other than those directly from Parramatta Road, no haulage of spoil will be undertaken between 10:00pm and 7:00am.

Site access/egress points, where haulage vehicles are moving in and out of site, will be managed (either manned or signalised) to ensure no pedestrians or cyclists are at risk. GLC will design and implement any Local Area Works (LAW's) required to safely facilitate the access and transiting of Heavy Vehicles. The Traffic Manager will advise the project team when road closures or other traffic arrangements are in place. In the event mud tracking or excessive dust on the road surfaces tracked by vehicles leaving site is identified, cleaning will be undertaken as required, typically via a street sweeper.

The primary egress routes for spoil haulage trucks will consider special events and cumulative impacts from external projects in the surrounding area to minimise traffic related impacts. The primary egress routes at Sydney Olympic Park Metro Station construction site was determined in consultation with SOPA. The proposed haul route will use Sarah Durak Avenue to gain access and egress via Olympic Boulevard onto Herb Elliot Avenue as per the arrangement with the Central Tunnelling Package (CTP). However, GLC will utilise the route proposed in the EIS during events when major event bussing closes access to Olympic Boulevard.

All Project haulage vehicles will be inspected to ensure items such as registration, emissions control, general condition, hydraulics, brakes, TARE weights, axle scales and UHF radios are in good working order. Additionally, in accordance with the requirements identified in the Noise and Vibration Management Sub-plan, the haulage vehicles will be fitted with residential grade mufflers, air brake silencers and non-tonal reversing alarms, which will be inspected upon entering the construction site for the first time. In accordance with MCoA 47, all spoil haulage vehicles will be clearly marked with Sydney Metro West labelling and the Project number (SSI 10038). This will enable immediate identification by a person viewing the Heavy Vehicle standing 20 metres away.

All spoil to be moved offsite will be accompanied by a Waste Classification report produced by a suitably qualified environmental consultant using sampling and analysis documentation from a National Association of Testing Authorities (NATA) accredited laboratory.

The daily ordering system will facilitate booking trucks, receipt sites, quantities and nominated haulage routes. Data from this will inform the project waste tracking register. The waste tracking register includes both waste disposal, as specified in the WMP, and spoil disposal, as identified in this sub-plan. The waste tracking register will be used for all spoil haulage transferred between construction sites and to offsite licensed facilities.

At the point of loading, a digital load measuring system, such as Loadrite, will be used to track the weight, number of loads, material type and source location of the spoil. Large visible graphics on each truck will be in place to show the maximum allowed load in each bin and a unique ID, both of which will be input into the Loadrite (or similar) system. The data will be downloadable and be incorporated into the waste tracking register, which allows each load spoil to be traced to a specific truck. Weighbridges will be used to frequently audit loads to ensure compliance to the nominated Axle and General Vehicle Maintenance requirements.

GPS systems such as Navman Teletrac will be used to track, monitor, and log trucks in real time. Compliance to receipt sites, haulage routes, speed and driver fatigue metrics will be tracked and logged to demonstrate compliance with CoR regulations and MCoA 83. Additionally, WasteLocate, a NSW EPA system, will be used to track loads of asbestos waste (weighing more than 100kg or >10m<sup>2</sup>), asbestos contaminated soils (weighing more than 100kgs), and tyres (weighing more than 200kgs or consisting of 20 or more tyres). Again, these metrics will be incorporated into the waste tracking register daily by the logistics team to ensure a whole of life account of spoil is documented, verifiable and auditable. Attachment 4 outlines the minimum information required for material and waste tracking. The material and waste tracking register is a live document and is updated as required with the most up to date information. A copy is saved on the GLC SharePoint.

The Site Supervisor, Senior Environmental Advisor and Spoil Manager will ensure that periodic monitoring and reporting is undertaken to:

- Identify the quantity and classification of material beneficially reused and disposed of at each licenced facility
- Identify and rectify any CoR issues
- Detail progress against environmental and sustainability targets.

The Site Supervisor and Spoil Manager will also ensure that any records required as part of the overall CoR responsibilities are maintained. The GLC Project Team will ensure compliance with all spoil management requirements through the training of all on-site personnel, delivery management, effective implementation of Waste Tracking Systems, and routine auditing.

## 8 COMPLIANCE MANAGEMENT

### 8.1 Roles and Responsibilities

The GLC Project Team’s organisational structure and overall roles and responsibilities are outlined in Section 7 of the CEMP. Specific responsibilities for the implementation of environmental controls are detailed in Table 10 of this Plan.

Key roles with regards to the management of spoil are identified in Table 10.

Table 10: Roles and responsibilities

Role	Authority and Responsibility
Environmental Manager	<ul style="list-style-type: none"> <li>Develop and implement the SPMP</li> <li>Oversee all required activities outlined in Section 7.0 and in accordance with this sub-plan</li> <li>Oversee compliance tracking and reporting</li> <li>Oversee the keeping of all environmental records</li> <li>Engage suitably qualified consultants to support implementation of this sub-plan</li> <li>In consultation with the Project Director and Site Supervisor, oversee the investigation and reporting of environmental incidents</li> <li>Regularly engage with the key stakeholders and other interface contractors to achieve environmental alignment.</li> <li>Responsible for management of system documents and for auditing site activities against this procedure</li> </ul>
Sustainability Manager	<ul style="list-style-type: none"> <li>Oversee the collection and retention of waste and spoil tracking records</li> <li>Regularly interface with the project team to ensure project sustainability targets are being met, and to identify potential opportunities for innovation</li> <li>Complete sustainability reporting including progress against waste tracking and spoil diversion targets</li> </ul>
Senior Environmental Advisor	<ul style="list-style-type: none"> <li>Have a responsibility to comply with the requirements of this SPMP and to manage their works accordingly.</li> <li>Personnel responsible for undertaking specific management actions as specified in Section 7.1.</li> <li>Complete inspections and monitoring.</li> <li>Complete reporting (refer to Section 8.3)</li> <li>Prepare ECMs to outline the controls in this sub-plan relevant to each work activity</li> <li>Respond to inquiries raised by the ER or Sydney Metro representatives</li> <li>Attend inspections with the ER, Sydney Metro, or other stakeholders</li> <li>Respond to environmental incidents and non-conformances</li> </ul>

Role	Authority and Responsibility
Environmental Advisor	<ul style="list-style-type: none"> <li>● Delivery of toolbox / prestart presentation (or other specific training) to inform work crews of the controls documented in the ECMs</li> <li>● Perform regular on-site liaison and inspections</li> <li>● Provide environmental advice and assistance to construction personnel</li> <li>● Manage implementation of SPMP</li> <li>● Respond to environmental incidents and non-conformances</li> </ul>
Site Auditor	<ul style="list-style-type: none"> <li>● NSW EPA Accredited</li> <li>● Reviews and approves validation reports</li> <li>● Prepares and issues Site Auditor Statements and Site Audit Reports</li> <li>● Undertakes Site Auditor Inspections to ensure compliance with RAPs</li> </ul>
Spoil Manager	<ul style="list-style-type: none"> <li>● Ensures that the spoil management measures outlined in the Spoil Management Plan are effectively implemented and maintained</li> <li>● Ensures compliance with all relevant statutes, regulations, rules, procedures, standards and policies of the Spoil Management Plan</li> <li>● Ensures that environmental records and files are collected and maintained</li> <li>● Ensures that spoil being transported offsite is tracked in accordance with the Spoil Management Plan</li> <li>● Regularly monitor the management of spoil in accordance with the Spoil Management Plan.</li> </ul>
Traffic Manager	<ul style="list-style-type: none"> <li>● Responsible for the implementation of traffic controls and designated haulage routes</li> <li>● Carry out regular inspections of traffic management measures to ensure they are effectively minimising impacts to traffic</li> <li>● Respond to traffic related incidents and non-conformances</li> </ul>
Construction Manager	<ul style="list-style-type: none"> <li>● Ensures compliance with this SPMP, procedures and ECMs</li> <li>● Work collaboratively with environment teams to ensure the mitigation and management measures in this SPMP are integrated into construction works</li> <li>● Ensure that spoil management impacts are always considered in forward planning and scheduling</li> </ul>
Site Supervisor	<ul style="list-style-type: none"> <li>● Install and maintain environmental controls in accordance with ESCPs and ECMs, including clear delineation of site boundaries and protection of No-Go Zones</li> <li>● Attend inspections with the ER, Sydney Metro, or other stakeholders</li> <li>● Implement corrective actions raised during environmental inspections in agreed timeframes</li> </ul>



Role	Authority and Responsibility
	<ul style="list-style-type: none"> <li>Notify the Environmental Representative of any observed impacts related to spoil management</li> </ul>
All personnel	<ul style="list-style-type: none"> <li>Notify Site Supervisor of any observed impacts related to spoil management.</li> </ul>

## 8.2 Training

The general project induction will include a component on spoil management to ensure that personnel understand the potential impacts from construction and the proposed mitigation measures.

The site induction training will address elements related to spoil management including:

- Existence and requirements of this SPMP
- Site layout
- Stockpile management
- Spoil management
- Dust suppression management
- The location of potentially sensitive receivers
- Designated haulage routes
- Details of the complaints handling procedure
- Details of the environmental incident procedures
- Relevant legislation
- Roles and responsibilities for spoil management.

Targeted training in the form of toolbox talks or tailored training sessions will also be provided to personnel with a key role in spoil management. Specific mitigation and management measures discussed during training sessions may include:

- Obligations and specific responsibilities under the Project MCoA, including site layout (location of construction elements and stockpiles)
- Identifying designated haulage routes away from sensitive receivers
- Contaminated spoil management
- Ensuring stockpiles and storage areas are covered and/ or located away from sensitive receivers.

Heavy vehicle operators that are hauling spoil offsite will receive specific training to minimise the risk of traffic related incidents and complaints received by the local community. This training will include a dedicated heavy vehicle induction that identifies designated haulage routes, as well as heavy vehicle and spoil haulage management measures to comply with as outlined in Section 7.1.

Specific training will be provided to personnel likely to work within or in proximity (<50 m) to sensitive receivers. Where required, toolbox /pre-start talks will also include dust suppression methods for spoil stockpiling.

Further details regarding inductions and training are outlined in Section 9 of the CEMP.

## 8.3 Monitoring, Inspections and Reporting

Monitoring, inspection, and reporting requirements are outlined in Table 5.

Additional requirements and responsibilities in relation to monitoring and inspections more broadly are documented in the CEMP.



Table 11: Inspection, monitoring and reporting requirements

Type of Inspection	Frequency	Standards	Reporting	Responsibility
Waste Tracking Register Monitoring	As required	Monitoring the classification, movement and disposal of spoil in accordance with this sub-plan.	Construction Monitoring Report Project Monthly Report	Spoil Manager
Spoil Tracking Inspections	Daily to weekly	Inspections of the appropriate disposal records and disposal dockets, including upload to the Waste Register	Waste tracking register	Spoil Manager
GPS tracking system (e.g. – Navman Teletrac) Monitoring	As required	Track, monitor and log trucks in real time. Compliance to receival sites, haulage routes, operating hours.	Electronic records Compliance Monitoring and Reporting Program	Traffic Manager
Sustainability Monitoring	As required	Monitoring the performance of beneficial reuse of spoil either within the project or at off-site locations, Waste Disposal Permits, Resource Recovery Order records, and waste dockets for any spoil disposed of to landfill sites.	Sustainability Report (monthly)	Sustainability Manager
Weekly Inspections	Weekly	Standard weekly inspections as outlined in the CEMP, will include scope for the inspection of the environmental controls and mitigation measures outlined in Section 7, including spoil storage, (including contaminated material), segregation, and reuse.	Weekly Environmental Inspection Report	Environmental Advisor

Type of Inspection	Frequency	Standards	Reporting	Responsibility
Daily Inspections	Daily	Daily walk through of the construction site, including inspection of the condition of spoil management controls, including: <ul style="list-style-type: none"> <li>Exposed spoil stockpiles</li> <li>Idling haulage vehicles</li> <li>Incorrect management of contaminated spoil.</li> </ul>	Site Diary	Site Supervisor
Site Auditor Inspections	As required to review and approve documentation associated with spoil management	Inspections of the construction site to ensure compliance with Remedial Action Plans. The Site Auditor will also need to review the waste/material tracking register regularly to ensure that material has been placed or disposed of in accordance with the RAP and the SPMP.	Details recorded within Interim Advices, Site Audit Memos, or within Site Audit Reports	Site Auditor
Independent Site Inspections	As required	Compliance with the requirements of this Plan and existing Approvals.	ER Site Inspection Report	ER / Sydney Metro

Specific reports prepared in response to spoil monitoring will capture detail including, but not limited, to:

- Records of compliance with the MCoA, REMMs, CEMF requirements and management measures in this SPMP
- Records of spoil tracking and heavy vehicle tracking
- Records of any spoil management measures implemented
- Records of spoil management inspections and monitoring undertaken.

## 8.4 Auditing

Audits (both internal and independent) will be undertaken to assess the effectiveness of environmental controls, compliance with this sub-plan, MCoA and other relevant approvals, licenses, and guidelines. These audits will be undertaken at planned intervals to provide information on whether the Project:

- Is meeting its compliance obligations
- Conforms to this sub-plan
- Determines if this sub-plan is effectively implemented and maintained.

As requested by the City of Parramatta Council, all internal and independent audits will be submitted to council for review as they are completed.

The approach to internal and independent audits, including auditing schedule, is outlined further in Section 11.3 of the CEMP.

## 8.5 Environmental Incidents

Management of environmental incidents is detailed in Section 12.2 of the CEMP.

Examples of incidents as they relate to spoil management may typically include:

- Spoil taken to incorrect disposal facility
- Spoil haulage spills on public roads
- Dispersion of contaminated spoil into waterways.

## 8.6 Complaints Register

All complaints made by the community and stakeholders will be managed in accordance with the Sydney Metro's requirements, the Overarching Community Communication Strategy, including the Sydney Metro Construction Complaints Management System (CCMS) (2021), as well as relevant MCoAs (B1 – B6). Further details on the complaints register can be found in the Project CEMP (SMWSTWTP-GLO-1NL-EV-PLN-000001), Section 10.

## 9 REVIEW AND IMPROVEMENT

### 9.1 Continuous Improvement

The Project Management Team will review the status and adequacy of the GLC EMS including the CEMP and Sub-plans. The objective of the review will be to ensure that it meets current Sydney Metro and GLC requirements as well as relevant environmental standards.

Continuous improvement of this SPMP will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives, and targets for the purpose of identifying opportunities for improvement.

The continuous improvement process will be designed to:

- Identify areas of opportunity for improvement of environmental management and performance
- Determine the cause or causes of non-conformances and deficiencies
- Develop and implement a plan of corrective and preventative action to address any non-conformances and deficiencies
- Verify the effectiveness of the corrective and preventative actions
- Document any changes in procedures resulting from process improvement
- Make comparisons with objectives and targets.

In order to ensure continual improvement and prevent recurring issues, this sub-plan will be reviewed in response to:

- Corrective actions arising from non-conformance, incidents, or audits
- Opportunity for improvement in environmental management performance which may be identified by the project team, ER or Sydney Metro
- Changes to the Gamuda Engineering (Australia) EMS.

Review of this sub-plan will occur annually as a minimum, or as needed in consultation with Sydney Metro and the ER. A copy of the updated plan and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure as outlined in the CEMP.

### 9.2 Document Updates

The processes described above may result in the need to update or revise this sub-plan. This will occur annually as a minimum, or as needed, and may only be approved by the Environmental Manager, or delegate. Where minor amendments are required to this SPMP, the revised SPMP will be issued to the ER for review and endorsement in accordance with MCoA A30(j).

### 9.3 Distribution

All GLC personnel and contractors will have access to this SPMP via the project document control management system.

The approved SPMP will be published on the GLC website soon after being approved and will be made publicly available until the end of Construction. In accordance with MCoA B11.

The document is uncontrolled when printed.

## 10 ATTACHMENTS

### Attachment 1 – Compliance Matrix

The MCoA, REMMs, CEMF requirements and EPL requirements that relate to this SPMP are detailed in the following tables.

#### **MCoAs**

ID	Conditions of Approval	Document Reference
A2	Stage 1 of the CSSI must only be carried out in accordance with all procedures, commitments, preventative actions, performance criteria and mitigation measures set out in the documents listed in Condition A1 of this schedule unless otherwise specified in, or required under, this approval.	CEMP
A6	Where the conditions of this approval require a document or monitoring program to be prepared, or a review to be undertaken, in consultation with identified parties, evidence of the consultation undertaken must be submitted to the Planning Secretary with the document. The evidence must include: (a) documentation of the engagement with the party identified in the condition of approval that has occurred before submitting the document for approval;	CEMP, Attachment 2
	(b) a log of the dates of engagement or attempted engagement with the identified party and a summary of the issues raised by them;	CEMP, Attachment 2
	(c) documentation of the follow-up with the identified party(s) where feedback has not been provided to confirm that the party(s) has none or has failed to provide feedback after repeated requests;	CEMP, Attachment 2
	(d) outline of the issues raised by the identified party(s) and how they have been addressed; and	CEMP, Attachment 2
	(e) a description of the outstanding issues raised by the identified party(s) and the reasons why they have not been addressed.	CEMP, Attachment 2
A47	All Heavy Vehicles used for spoil haulage must be clearly marked on the sides and rear with the project name and application number to enable immediate identification by a person viewing the Heavy Vehicle standing 20 metres away.	Section 7.7

ID	Conditions of Approval	Document Reference
C1	Construction Environmental Management Plans (CEMPs) and CEMP Sub-plans must be prepared in accordance with the Construction Environmental Management Framework (CEMF) included in the documents listed in Condition A1 of this schedule to detail how the performance outcomes, commitments and mitigation measures specified in the documents listed in Condition A1 of this schedule will be implemented and achieved during construction.	CEMP and Attachment 1
C5(e)	Of the CEMP Sub-plans required under Condition C1 of this schedule, the following CEMP Sub-plans must be prepared in consultation with the relevant government agencies identified for each CEMP Sub-plan. Details of issues raised by a government agency during consultation must be included in the relevant CEMP Sub-plan, including copies of all correspondence from those government agencies as required by Condition A6 of this schedule. Where a government agency (ies) request(s) is not included, the Proponent must provide the Planning Secretary / ER (whichever is applicable) justification as to why:  (e) Spoil – Relevant Council(s) and SOPA (in respect of Sydney Olympic Park)	Section 1.4, Attachment 2
C6	The CEMP Sub-plans must state how:	
	(a) the environmental performance outcomes identified in the documents listed in Condition A1 of this schedule will be achieved;	Attachment 1
	(b) the mitigation measures identified in the documents listed in Condition A1 of this schedule will be implemented;	Attachment 1
	(c) the relevant conditions of this approval will be complied with; and	Attachment 1
	(d) issues requiring management during construction (including cumulative impacts), as identified through ongoing environmental risk analysis, will be managed through SMART principles.	CEMP, Section 7.1
C7	With the exception of any <b>CEMP Sub-plans</b> expressly nominated by the Planning Secretary to be endorsed by the ER, all <b>CEMP Sub-plans</b> must be submitted to the Planning Secretary for approval.	Section 1.5
C9	Any of the <b>CEMP Sub-plans</b> to be approved by the Planning Secretary must be submitted to the Planning Secretary with, or subsequent to, the submission of the <b>CEMP</b> but in any event, no later than one (1) month before construction or where construction is phased no later than one (1) month before the commencement of that phase.	Section 1.5

ID	Conditions of Approval	Document Reference
C10	Construction must not commence until the <b>CEMP</b> and all <b>CEMP Sub-plans</b> have been approved by the Planning Secretary or endorsed by the <b>ER</b> (whichever is applicable), unless otherwise agreed by the Planning Secretary. The <b>CEMP</b> and <b>CEMP Sub-plans</b> , as approved by the Planning Secretary or endorsed by the <b>ER</b> (whichever is applicable), including any minor amendments approved by the <b>ER</b> , must be implemented for the duration of construction. Where construction of Stage 1 of the CSSI is phased, construction of a phase must not commence until the <b>CEMP</b> and <b>CEMP Sub-plans</b> for that phase have been approved by the Planning Secretary or certified by the <b>ER</b> upon nomination by the Planning Secretary (whichever is applicable).	Section 1.5
D37(d)(iv)	Notwithstanding Conditions D35 and D36 of this schedule work may be undertaken outside the hours specified in the following circumstances: (d) By Prescribed Activity, including: (iv) haulage of spoil except between the hours of 10:00pm and 7:00am to / from the Five Dock and Westmead construction sites and to / from Burwood North construction site using any roads / streets other than directly from Parramatta Road.	Section 7.77.1
D83	The locations of all Heavy Vehicles used for spoil haulage must be monitored in real time and the records of monitoring be made available electronically to the Planning Secretary and the EPA upon request for a period of no less than one (1) year following the completion of construction.	Section 7.7 and Section 8.3
D84	The primary egress routes for spoil haulage trucks at Sydney Olympic Park metro station construction site must be determined in consultation with SOPA.	Section 7.7
D90(e)	Vehicles associated with the project workforce (including light vehicles and Heavy Vehicles) must be managed to: (e) ensure spoil haulage vehicles adhere to the nominated haulage routes identified in the CTMPs	Section 7.7
D99	Opportunities to maximise spoil material removal by non-road methods must be investigated and implemented where reasonably practicable to minimise movements by road.	Section 7.1
D111	Waste generated during construction and operation must be dealt with in accordance with the following priorities: (a) waste generation must be avoided and where avoidance is not reasonably practicable, waste generation must be reduced;	Section 7.2, Section 7.4 and Section 7.5
	(b) where avoiding or reducing waste is not possible, waste must be re-used, recycled, or recovered; and	Section 7.2, Section 7.4 and Section 7.5



ID	Conditions of Approval	Document Reference
	(c) where re-using, recycling or recovering waste is not possible, waste must be treated or disposed of.	Section 7.6
D112	The importation of waste and the storage, treatment, processing, reprocessing or disposal of such waste must comply with the conditions of the current EPL for Stage 1 of the CSSI, or be done in accordance with a Resource Recovery Exemption or Order issued under the <i>Protection of the Environment Operations (Waste) Regulation 2014</i> , as the case may be.	WMP
D113	Waste must only be exported to a site licensed by the EPA for the storage, treatment, processing, reprocessing or disposal of the subject waste, or in accordance with a Resource Recovery Exemption or Order issued under the <i>Protection of the Environment Operations (Waste) Regulation 2014</i> , or to any other place that can lawfully accept such waste.	Section 7.6
D114	All waste must be classified in accordance with the EPA's <i>Waste Classification Guidelines</i> , with appropriate records and disposal dockets retained for audit purposes.	Section 7.6 and Section 8.3

### **REMMs**

ID	Mitigation Measure	Document Reference
WR1	All waste would be assessed, classified, managed, transported and disposed of in accordance with the Waste Classification Guidelines and the Protection of the Environment Operations (Waste) Regulation 2014.	Section 5.1, Section 7.1, Section 7.2, Section 7.3, Section 7.4, Section 7.5, Section 7.6, Section 7.7
WR2	A hazardous material survey would be completed for those buildings and structures suspected of containing hazardous or special waste materials (particularly asbestos) prior to their demolition. If hazardous waste or special waste (e.g., asbestos) is encountered, it would be handled and managed in accordance with relevant legislation, codes of practice and Australian standards.	WMP, Section 7.1
WR3	Construction waste would be minimised by accurately calculating materials brought to the site and limiting materials packaging.	WMP

ID	Mitigation Measure	Document Reference
WR4	Waste streams would be segregated to avoid cross-contamination of materials and maximise reuse and recycling opportunities.	Section 5.1, Section 7.1
WR5	A material tracking system would be implemented for material transferred between Sydney Metro West sites and to offsite locations such as licensed waste management facilities.	Section 7.7
NV14	Further assessment of construction traffic would be completed during detailed design, including consideration of the potential for exceedances of the NSW Road Noise Policy base criteria (where greater than 2 dB increases are predicted). The potential impacts would be managed using the following approaches, where feasible and reasonable: <ul style="list-style-type: none"> <li>● On-site spoil storage capacity would be maximised to reduce the need for truck movements during sensitive times</li> <li>● Vehicle movements would be redirected away from sensitive receiver areas and scheduled during less sensitive times</li> <li>● The speed of vehicles would be limited and the use of engine compression brakes would be avoided</li> <li>● Heavy vehicles would not be permitted to idle near sensitive receivers.</li> </ul>	Section 7.1

### **CEMF Requirements**

Clause	Requirement	Document Reference
6.1 (a)	The following spoil management objectives will apply to the construction of the project:	Section 3.1
	i.Minimise spoil generation where possible;	
	i.The project will mandate 100% reuse or recycling (on or off-site) of usable spoil;	Section 3.1
	i.Spoil will be managed with consideration to minimising adverse traffic and transport related issues;	Section 7.1 and Section 7.7
	/.Spoil will be managed to avoid contamination of land or water;	Section 7.1, Section 7.3.2 and 7.6
	/.Spoil will be managed with consideration of the impacts on residents and other sensitive receivers; and	Section 7.1 and 7.3

Clause	Requirement	Document Reference
	i. Site contamination will be effectively managed to limit the potential risk to human health and the environment.	Section 7.1 and Section 7.3.2
6.2 (a)	Principal Contractors will develop and implement a Spoil Management Plan for their scope of works. The Spoil Management Plan will include as a minimum:	Attachment 1, Section 7.1, Section 7.2, Section 7.3, Section 7.4, Section 7.5, Section 7.6, Section 7.7
	i. The spoil mitigation measures as detailed in the environmental approval documentation;	
	ii. The responsibilities of key project personnel with respect to the implementation of the plan;	Section 8.1
	iii. Procedures and methodologies for the haulage and disposal locations, storage and stockpiling arrangements, including those for virgin excavated natural material, contaminated and unsuitable material;	Section 7.3, Section 7.6, Section 7.7 and Attachment 3
	iv. Procedures for the testing, excavation, classification, handling and reuse of spoil;	Section 7.1, Section 5.1, Section 7.2, Section 7.4, Section 7.5
	v. measures that will be implemented to both reduce spoil quantities and maximise the beneficial reuse of spoil which will be generated during the performance of the Contractor's Activities, including how spoil generation is minimised through the design development process;	Section 7.1, Section 7.4 and Section 7.5
	vi. Details, links or references to where traffic movements in relation to spoil are described, and measures that will be implemented to minimise traffic and noise impacts associated with haulage and disposal of spoil;	Section 7.1, Section 7.6
	vii. quantities for reuse of spoil within the Construction Site, for beneficial reuse of spoil off site and for spoil disposal;	Section 5.2
	viii. Processes and procedures for the management of the environmental and social impacts of spoil transfer and reuse;	Section 7.1, Section 7.3, Section 7.7, Section 8.3 and Section 8.5

Clause	Requirement	Document Reference
	ix. A register of spoil receipt sites that includes the site or project name, location, capacity, site owner and which tier the site is classified as under the spoil reuse hierarchy;	Attachment 4
	x. Spoil management monitoring requirements; and	Section 8.3
	xi. Compliance record generation and management.	Section 8.3
6.2 (b)	Spoil management measures will be included in regular inspections undertaken by the Contractor, and compliance records will be retained. These will include:	Section 8.3
	i. Records detailing the beneficial re-use of spoil either within the project or at off-site locations; and	
	ii. Waste dockets for any spoil disposed of to landfill sites.	Attachment 4

### **Environment Protection Licence**

The Project construction activities are designated as '**Railway activities—railway infrastructure construction**' under Schedule 1 of the POEO Act. Scheduled activities under clause 48 of the POEO Act, require an Environmental Protection Licence (EPL) for the premise at which a scheduled activity is carried on. The EPL typically regulates the emissions of potentially offensive odours and dust.

Waste transporters who remove trackable waste as defined in Schedule 1 of the POEO Act 1997 are required to be licensed. As such, the procurement and onboarding process will ensure the correct licenses are in place prior to engaging waste transporters.

To maximise reuse of spoil, Resource Recovery Order(s) and Resource Recovery Exemption(s) will be sought for material leaving the Project site.

The SPMP will address the following requirements from EPL No. 21676

ID	EPL Condition	Document Reference
O5.4	Excavated material suitable for re-use within the premises, may be transported from one part of the premises to another part of the premises by road.	7.4
Refer also Waste Management Plan for waste management requirements.		

## Attachment 2 – Stakeholder Consultation

### Engagement Log

Stakeholder	Date of Engagement/ Attempted Engagement
SOPA	<ul style="list-style-type: none"> <li>Sydney Metro sent SOPA an invitation to review and comment on the SPMP on 05/04/2022, which included a cover letter and the SPMP as a PDF document</li> <li>SOPA provided comments on the 05/04/2022, which was outside the 21 day consultation period. These comments were addressed in revision E of the SPMP.</li> </ul>
City of Parramatta Council	<ul style="list-style-type: none"> <li>Sydney Metro sent the City of Parramatta Council an invitation to review and comment on the SPMP on 05/04/2022, which included a cover letter and the SPMP as a PDF document</li> <li>The City of Parramatta Council provided comments on 05/05/2022</li> </ul>
Cumberland City Council	<ul style="list-style-type: none"> <li>Sydney Metro sent Cumberland City Council an invitation to review and comment on the SPMP on 05/04/2022, which included a cover letter and the SPMP as a PDF document</li> <li>The Cumberland City Council provided comments on 27/04/2022</li> </ul>

### Comments Register

Stakeholder	Comment Raised	GLC Response	Where Addressed
City of Parramatta Council	Council should support and encourage the minimisation of any surplus spoil from the development with reuse of materials within sites and within project wherever possible. This will limit environmental impacts (noise, dust, air/water pollution) imposed by having to transport surplus spoil material across the LGA to off-project disposal sites.	Noted. A paragraph has been added to Section 3.1 to emphasise the benefit of reusing spoil materials onsite.	Section 3.1
	Reference is made to sediment and erosion controls being in place, these should be designed	A new paragraph has been added to Section 7.3 to include erosion and sediment controls to	Section 7.3

Stakeholder	Comment Raised	GLC Response	Where Addressed
	so as to cope with significant rainfall events as has been experienced in Sydney in recent times to ensure that materials are not allowed to leave the stockpile locations and pose a risk to the environment. This is considered especially important for contaminated material stockpiles where extra measures such as placing undercover within containment sheds may be required.	prevent dispersion of contaminated stockpiled spoil during high rainfall events.	
	As mentioned earlier offsite reuse should be kept to as minimal a level as possible, however if required locations nearest to the removal site should be considered to limit potential environmental impacts of spoil transport and to provide a resource to development sites within the LGA of the project.	A new paragraph has been added to Section 7.5 which states that receival sites will be selected based on proximity to the construction site.	Section 7.5
	Offsite material movement and other major movements will need to take in account activities occurring in the precinct areas during construction, e.g. major events in SOPA (Easter Show, concerts, sporting events), Rosehill Racecourse (CLYDE MSF) and any other major works happening in conjunction e.g. PLR and construction project in Parramatta CBD.	A new paragraph has been added to Section 7.7 to include mitigation measures for cumulative impacts to traffic during special events.	Section 7.7
	It is requested that copies of the audits (internal and independent) are provided to Council for review upon completion.	Noted. A statement has been added to Section 8.4 to specify that internal and independent audits will be submitted to City of Parramatta Council.	Section 8.4
	It is requested that details of the complaint register be provided to Council customer service team prior to commencement of operations.	Noted. A statement has been added to Section 8.6 to specify that the complaints register will be submitted to City of Parramatta Council prior to operation of the Project.	Section 8.6



Stakeholder	Comment Raised	GLC Response	Where Addressed
Cumberland City Council	Contaminated spoil designated for remediation, offsite reuse or disposal will be managed in accordance with the relevant related Detailed Site Investigation (DSI) and Remedial Action Plan (RAP). There would also be separate sub plans in place for Soil and Water Management, Waste, Air Quality and Groundwater management.	Once the nature of any contaminated spoil is known from the DSI, RAPs will be developed to outline the management procedures for remediation, reuse or disposal of the spoil. This is outlined in Section 7.3.2, Section 7.4, Section 7.5 and Section 7.6. The SWMP outlines the DSI and RAP process.	Section 7.3.2, Section 7.4, Section 7.5 and Section 7.6
	The Spoil sub Plan references a site auditor being involved (Table 9 – page 34) and this will effectively ensure that the entire process in terms of contamination risks are overseen. There will also be a complaints register which we had suggested in our comments on the metro review and there will also be protocols in place for Environmental Incidents under the current licences.	Refer to Section 8.5 and Section 8.6 for information regarding the procedure for Environmental Incidents and the Complaints Register.	Section 8.5 and Section 8.6
SOPA	Section 1.1 - States no surface works are proposed at SOP except for retrieval of TBM - Will station box excavation be included or are TBM being pulled out of a smaller opening?	Station box excavation at Sydney Olympic Park is not part of the scope of this package of work. The TBM will be pulled out of the SOP station box which will be excavated as part of the Central Tunnelling Package. The excavation of that station box is therefore not subject to this plan	N/A
	SOP will include short term stockpiling of spoil. Clarity should be provided around where stockpile management at SOP will be undertaken – Is this within the tunnel or at the surface? How will sediment basin and controls be applied if spoil is not being managed at the surface?	There will be no short term stockpiling of spoil at Sydney Olympic Park as there is no spoil to be generated at Sydney Olympic Park. Section 1.1 outlines that the only activity to occur at SOP is retrieval of the TBM. Section 5.2 shows the volume of spoil generated at the site is “0”. Section 7.3, which references short term stockpiling at	Section 7.3

Stakeholder	Comment Raised	GLC Response	Where Addressed
		each site, has been updated to explicitly state no short-term stockpiling at SOP.	
	The document indicates stockpiles will be located in areas that do not impact heritage sites but they should also be located away from any receiving waters or stormwater drains to minimise potential for off-site impacts	As above no stockpiling at SOP.	N/A
	Contaminated stockpiles - how will these be generally managed at locations where spoil is not being generated such as SOP.	As above, there is no stockpiling of spoil, including contaminated spoil, at SOP under this SPMP.	N/A

### **Comments Register – Outstanding Issues**

Stakeholder	Comment Raised	GLC Response	Proposed Action
City of Parramatta Council	Reference is made to the Soil and Water Management Sub-Plan regarding further detail concerning the management of contamination, unexpected finds protocol and relevant site audit processes. This sub-plan should be provided to Council for review and comment also.	It is acknowledged that the review of the SPMP is incomplete until City of Parramatta Council is provided with the Soil and Water Management Sub-plan, which outlines the management of contamination, unexpected finds protocol and relevant site audit processes applicable to the SPMP.	The Soil and Water Management Sub-plan has been provided to City of Parramatta Council for review.
Cumberland City Council	Whilst it would be good for the Spoil Management Plan to specifically list the DSI and RAP documents under the 'Existing Environment' or 'Environmental Mitigation and Management Measures' section, it is understood that these reports are not currently available and	The process around development of the DSI and RAP documents will be discussed in the Soil and Water Management Sub-plan. The Soil and Water Management Sub-plan outlines the process for managing	N/A

Stakeholder	Comment Raised	GLC Response	Proposed Action
	will be provided at some stage depending on what work has/hasn't been approved as yet but it is understood these do form part of the overarching review process	contamination, including contaminated spoil.	

**Meeting Minutes**

**Copies of Correspondence**

## Attachment 3 – Waste and Spoil Reveal Sites

The table below provides a guide as to the potential reveal sites GLC will utilise. All the listed sites may not be used with the list updated throughout the course of works as new opportunities come online. Each disposal site will be reviewed and approved prior to use with a live register maintained by the Spoil Team recording details such as Name, Landowner, Principal Manager, Licencing, Approvals, Location, Capacity, Site Owner and which tier the site is classified as under the spoil reuse hierarchy.

Disposal Site	Address	Accepted Waste Types	EPL number/ Planning Approval reference	Tier List (re-use options)
Aussie Skips Recycling	14 Bellfrog Street, Greenacre NSW 2190	<ul style="list-style-type: none"> <li>Asphalt Waste</li> <li>Cured Concrete Waste</li> <li>General Solid Waste</li> <li>Virgin Excavated Natural Material (VENM)</li> </ul>	EPL No. 21389	Other development projects
Aussie Skips Recycling	Unit 5, 84-108 Madeline Street, Strathfield South NSW 2136	<ul style="list-style-type: none"> <li>Building and Demolition Waste (concrete, brick etc.)</li> <li>General Solid Waste (non- putrescible),</li> </ul>	EPL No. 20885	Other development projects, landfill management
Australian Native Landscapes Pty Ltd	60 Crawford Road, Cooranbong NSW 2265	<ul style="list-style-type: none"> <li>Virgin Excavated Natural Material (VENM)</li> <li>Material which complies with a Resource Recovery order/exemption</li> </ul>	EPL No. 11324	Environmental projects
AWJ	657-769 Mamre Rd Kemps Creek	<ul style="list-style-type: none"> <li>Virgin Excavated Natural Material (VENM)</li> <li>Material which complies with a Resource Recovery order/exemption</li> </ul>	SSD9522	Other development projects
Bingo Industries Recycling Park	1 Kangaroo Ave, Eastern Creek	<ul style="list-style-type: none"> <li>Building and Demolition Waste (concrete, brick etc.)</li> <li>Asphalt waste</li> <li>Waste Concrete Slurry</li> </ul>	EPL No. 13426, 20121	Landfill management

Disposal Site	Address	Accepted Waste Types	EPL number/ Planning Approval reference	Tier List (re-use options)
		<ul style="list-style-type: none"> <li>Concrete bricks and roof tiles</li> <li>Cured Concrete waste from a batch plant</li> <li>Virgin Excavated Natural Material (VENM)</li> <li>Excavated Natural Material (ENM)</li> </ul>		
Boral Recycling Pty Ltd, St Peters	25 Burrows Road South, St Peters NSW 2044	<ul style="list-style-type: none"> <li>Building and Demolition Waste (concrete, brick etc.)</li> <li>Asphalt waste</li> <li>Virgin Excavated Natural Material (VENM)</li> </ul>	EPL No. 12418	Other development projects
Boral Recycling Pty Ltd, Wetherill Park	39 Widemere Road, Wetherill Park NSW 2164	<ul style="list-style-type: none"> <li>Building and Demolition Waste (concrete, brick etc.)</li> <li>Asphalt waste</li> <li>Waste Concrete Slurry</li> <li>Concrete bricks and roof tiles</li> <li>Cured Concrete waste from a batch plant</li> <li>Virgin Excavated Natural Material (VENM)</li> <li>Excavated Natural Material (ENM)</li> </ul>	EPL No. 11815	Other development projects
Brandown, Kemps Creek	Lot 90 Elizabeth Drive, Kemps Creek NSW 2178	<ul style="list-style-type: none"> <li>Recycling waste, concrete bricks asphalt mixed building and construction waste, soil that meets the CT1 threshold for General Solid Waste</li> <li>Landfill, material that is un- recyclable and contaminated soils classified as General Solid Waste, as by test results</li> </ul>	EPL No. 5186	Landfill management



Disposal Site	Address	Accepted Waste Types	EPL number/ Planning Approval reference	Tier List (re-use options)
Breen Holdings, Kurnell	330 Captain Cook Drive, Kurnell NSW 2231	<ul style="list-style-type: none"> <li>General Solid Waste</li> <li>Virgin Excavated Natural Material (VENM)</li> </ul>	EPL No. 4608	Other development projects, Landfill management
Bringelly Business Hub	50 Bringelly Road, Horningsea Park NSW	<ul style="list-style-type: none"> <li>Virgin Excavated Natural Material (VENM)</li> <li>Excavated Natural Material (ENM)</li> <li>Material which complies with a Resource Recovery order/exemption</li> </ul>	SSD6324 and CO11994.01 (under CC SY170236C01)	Other development projects
Cleanaway t/a Enviroguard Pty Ltd, Erskine Park Landfill	85–87 Quarry Road, Erskine Park NSW 2759	<ul style="list-style-type: none"> <li>General Solid Waste (non- putrescible), including immobilised waste which is assessed as General Solid Waste (non- putrescible) and are subject to general or specific immobilisation approvals</li> <li>Asbestos waste</li> </ul>	EPL No. 4865	Landfill management
Cleanaway, Kooragang Island Hazardous Waste Treatment Facility	Raven Street, Kooragang Island NSW 2304	<ul style="list-style-type: none"> <li>Hazardous Solid Waste</li> </ul>	EPL No. 6124	Landfill Management
Cleanaway, Homebush	Hill Rd & Pondage Link, Sydney Olympic Park	<ul style="list-style-type: none"> <li>Waste types listed in Condition L3.1 of EPL 4560, including lead contaminated liquid waste.</li> </ul>	EPL No. 4560	Landfill management
Cleanaway, St Marys	42-46 Charles Street Saint Marys NSW 2760	<ul style="list-style-type: none"> <li>Acid Sulphate Soil (Special Waste – Asbestos)</li> </ul>	EPL No. 20271	Landfill management
Concrete Recyclers, Camellia	14 Thackeray Street, Camellia NSW 2142	<ul style="list-style-type: none"> <li>Building and demolition waste (concrete, brick, asphalt)</li> </ul>	EPL No. 6664 No night tipping.	Other development projects

Disposal Site	Address	Accepted Waste Types	EPL number/ Planning Approval reference	Tier List (re-use options)
CPB M12 West	Elizabeth Drive, Penrith, NSW 2741	<ul style="list-style-type: none"> <li>Virgin Excavated Natural Material (VENM)</li> <li>Material which complies with the November 2022 Resource Recovery Order/Exemption</li> </ul>	EPL No. 21595	Other development projects
CPB Northern Road	Stage 5 and Stage 6, Northern Road, Bringelly NSW	<ul style="list-style-type: none"> <li>Virgin Excavated Natural Material (VENM)</li> <li>Material which complies with a Resource Recovery order/exemption</li> </ul>	EPL No. 21189 and EPL No. 21248	Other development projects
CSR	Martins Rd, Badgerys Creek	<ul style="list-style-type: none"> <li>Virgin Excavated Natural Material (VENM)</li> </ul>	EPL No. 684	Other development projects
Dial a Dump Industries Pty Ltd, Eastern Creek (Genesis Recycling Facility)	Honeycomb Drive, Eastern Creek NSW 2766	<ul style="list-style-type: none"> <li>Wood waste</li> <li>Garden waste</li> <li>Waste tyres</li> <li>Building and demolition waste</li> <li>GSW (CT1) Soils</li> </ul>	EPL No. 20121	Landfill management
Dial a Dump Industries Pty Ltd, Eastern Creek (Genesis Waste Facility (Landfill))	Honeycomb Drive, Eastern Creek NSW 2766	<ul style="list-style-type: none"> <li>Asbestos contaminated wastes (including asbestos soils)</li> <li>Waste tyres</li> <li>General Solid Waste (non-putrescible)</li> <li>Acid sulphate soil and potentially acid sulphate soil that has been treated and meets the definition of General Solid Waste (non-putrescible)</li> </ul>	EPL No. 13426	Landfill management
Elford Group, Badgerys Creek	320–400 Badgerys Creek Road, Badgerys Creek NSW 2555	<ul style="list-style-type: none"> <li>Virgin Excavated Natural Material (VENM)</li> <li>Excavated Natural Material (ENM)</li> </ul>	EPL No. 20498 Development Application No. DA- 693/2009/C	Other development projects

Disposal Site	Address	Accepted Waste Types	EPL number/ Planning Approval reference	Tier List (re-use options)
Enviroguard	Landfill, 4 Quarry Road Erskine Park NSW 2759	<ul style="list-style-type: none"> <li>Asbestos</li> <li>General Solid Waste</li> </ul>	EPL No. 4865	Landfill management
Environmental Treatment Solutions, Blayney and associated disposal sites	79 Marshalls Lane, Blayney NSW 2799	<ul style="list-style-type: none"> <li>Waste types listed in Condition L2.1 of EPL No. 13230, including (but not limited to):</li> <li>Hydrocarbons waste</li> <li>Tyres</li> <li>Asbestos</li> <li>PCB waste</li> <li>Various chemical wastes</li> <li>Filter cake</li> <li>Lead Waste</li> </ul>	EPL No. 13230	Landfill management
Enviroacific Barangaroo	30–38 Hickson Road, Millers Point NSW 2000	<ul style="list-style-type: none"> <li>Virgin Excavated Natural Material (VENM)</li> <li>Material which complies with a Resource Recovery order/exemption</li> </ul>	EPL No. 13336	Other development projects
Enviroacific Prestons	57 Jemma Road, Prestons, NSW 2170	<ul style="list-style-type: none"> <li>GSW-CT1 and CT2, RSW, Special Waste,</li> <li>Bricks, Concrete, Asphalt, Timber, Green waste, VENM</li> </ul>	Take any type of waste, and they have an agreement with multiple waste transfer stations	Landfill management
Fairfield City Council's Sustainable Resource Centre, Wetherill Park	Hassall Street, Wetherill Park NSW 2164	<ul style="list-style-type: none"> <li>Building and demolition waste, including terracotta roof tiles, clay bricks, and clean concrete (with or without steel)</li> <li>Asphalt waste (ripped and profiled)</li> <li>Virgin Excavated Natural Material (VENM)</li> </ul>	EPL No. 5713	Other development projects
Fairfield East (T&I Civil)	61-67 Mandarain Street, Fairfield East	<ul style="list-style-type: none"> <li>Excavated Natural Material (ENM)</li> <li>Material which complies with the November 2022 Resource Recovery Order/Exemption</li> <li>Virgin Excavated Natural Material (VENM)</li> </ul>	DA262.1.2020 PAN-20218	Other Development Projects

Disposal Site	Address	Accepted Waste Types	EPL number/ Planning Approval reference	Tier List (re-use options)
Gow Street Recycling Centre	81-87 Gow Street, Padstow NSW 2211	<ul style="list-style-type: none"> <li>Building and demolition waste and asphalt waste, classified as General Solid Waste (Recyclable – refer to Section 5.1.3)</li> </ul>	EPL No. 10943	Other development projects
Hi-Quality Waste Management Pty Ltd, St Marys	37 Lee Holm Road, St Marys NSW 2760	<ul style="list-style-type: none"> <li>General Solid Waste (Recyclable – refer to Section 5.1.3), including recyclable building and demolition waste (concrete, brick, asphalt)</li> <li>Virgin Excavated Natural Material (VENM)</li> </ul>	EPL No. 5857	Other development projects
Load & Go	41 Roberts Road, Chullora NSW 2190	<ul style="list-style-type: none"> <li>Excavated Natural Material (ENM)</li> <li>Material which complies with the November 2022 Resource Recovery Order/Exemption</li> <li>Virgin Excavated Natural Material (VENM)</li> </ul>	DA2022.179	Other development projects
MET Recycling, Silverwater	Cnr Newton Street North and Carnarvon Street, Silverwater NSW 2128	<ul style="list-style-type: none"> <li>General Solid Waste (Recyclable – refer to Section 5.1.3)</li> </ul>	EPL No. 20948	Other development projects
Metropolitan Demolition and Recycling, St Peters	396 Princes Highway, St Peters NSW 2044	<ul style="list-style-type: none"> <li>Building and demolition waste</li> <li>Asphalt waste</li> </ul>	EPL No. 11483	Other development projects
MIRVAC	Mamre Road, Kempas Creek	<ul style="list-style-type: none"> <li>Virgin Excavated Natural Material (VENM)</li> </ul>	To be confirmed once approved by the Planning Secretary	Other development projects
Nepean Business Park (Great River)	Lugard Street, Penrith NSW 2750	<ul style="list-style-type: none"> <li>Material which complies with the November 2022 Resource Recovery Order/Exemption</li> <li>Virgin Excavated Natural Material (VENM)</li> </ul>	Development Approval (DA) 2 Modification 11 & Modification 12	Other development projects

Disposal Site	Address	Accepted Waste Types	EPL number/ Planning Approval reference	Tier List (re-use options)
Northwest Recycling Centre	132 Burfitt Rd, Riverstone NSW 2765	<ul style="list-style-type: none"> <li>Green waste</li> </ul>	Can only take green waste	Land restoration
Penrith Lakes Scheme	89–151 Old Castlereagh Road, Cranebrook NSW 2749	<ul style="list-style-type: none"> <li>Virgin Excavated Natural Material (VENM)</li> <li>Excavated Natural Material (ENM)</li> </ul>	Development Approval (DA) 3, Modification 4, approved by DP&E on 30/04/15	Other development projects
Port Kembla Outer Harbour Reclamation	Port Kembla Outer Harbour	<ul style="list-style-type: none"> <li>Virgin Excavated Natural Material (VENM)</li> </ul>	Major Project Application No: 08_0249	Other development projects
Qube Moorebank	Moorebank Precinct East, Moorebank Avenue, Moorebank NSW 2170	<ul style="list-style-type: none"> <li>Virgin Excavated Natural Material (VENM)</li> <li>Excavated Natural Material (ENM)</li> <li>Material which complies with the November 2018 Resource Recovery order/exemption</li> <li>Material which complies with the June 2019 Resource Recovery Order/Exemption</li> </ul>	MPE Stage 2 SSD 7628	Other development projects
Rock & Dirt, South Windsor	306 Racecourse Road, Clarendon NSW 2756	<ul style="list-style-type: none"> <li>General Solid Waste (Recyclable – refer to Section 5.1.3)</li> </ul>	EPL No. 4849	Other development projects
Sims Metal Management Alexandria		<ul style="list-style-type: none"> <li>Steel and scrap metal</li> </ul>	Can only take steel.	Other development projects
Spring Farm Development Site (Tripodi Transport)	1102 Glenee Road, Spring Farm NSW 2570	<ul style="list-style-type: none"> <li>Virgin Excavated Natural Material (VENM)</li> <li>Excavated Natural Material (ENM)</li> <li>Sandstone Only</li> </ul>	Development Application No. E3/94 (continuing DA)	Other development projects

Disposal Site	Address	Accepted Waste Types	EPL number/ Planning Approval reference	Tier List (re-use options)
Suez Eastern Creek	Eastern Creek Waste and Recycling Centre, Wallgrove Road Eastern Creek NSW 2766	<ul style="list-style-type: none"> <li>Virgin Excavated Natural Material (VENM)</li> </ul>	EPL No. 12517	Other development projects
Suez, Kemps Creek	1725 Elizabeth Drive, Kemps Creek NSW 2178	<ul style="list-style-type: none"> <li>Solid classified general dry wastes</li> <li>Restricted classified wastes</li> <li>Asbestos</li> <li>Asbestos contaminated wastes</li> </ul>	EPL No. 4068	Landfill management
Suez, Lucas Heights	New Illawarra Road, Lucas Heights NSW 2234	<ul style="list-style-type: none"> <li>Excavated Natural Material (ENM) Virgin Excavated Natural Material (VENM) Clay only</li> <li>Solid classified general dry waste</li> <li>Asbestos</li> <li>Asbestos contaminated waste</li> </ul>	EPL No. 5065	Landfill Management
Sydenham Station	Sydenham Metro Gate 1, Railway Parade, Marrickville NSW 2204	<ul style="list-style-type: none"> <li>Virgin Excavated Natural Material (VENM)</li> <li>Material which complies with a Resource Recovery order/exemption</li> </ul>	EPL No. 21147	Other development projects
Sydney Recycling Park, Kemps Creek	16–23 Clifton Avenue, Kemps Creek NSW 2178	<ul style="list-style-type: none"> <li>General Solid Waste</li> </ul>	EPL No. 12901	Landfill management
Tox Free St Marys	40 Christie Street, St Marys NSW 2760	<ul style="list-style-type: none"> <li>Absorbent pads/booms (used spill kits)</li> <li>Hydraulic hoses</li> <li>Fuel filters</li> <li>Fuel drums (emptied)</li> <li>Grease/oil/fuel stored in drums (used material)</li> </ul>	EPL No. 12628	Landfill management

Disposal Site	Address	Accepted Waste Types	EPL number/ Planning Approval reference	Tier List (re-use options)
Tox Free, Narangba (QLD)	8–12 Krypton Street, Narangba QLD 4504	<ul style="list-style-type: none"> <li>• Treatment and disposal of Polychlorinated</li> <li>• Biphenyl (PCB) impacted soil</li> </ul>	QLD DEHP Environmental Authority Permit number EPPR00461413	
Tox Free, South Windsor	Cnr Blackman Crescent and Fairy Road, South Windsor NSW 2756	<ul style="list-style-type: none"> <li>• Hazardous Waste</li> </ul>	EPL No. 4602	Landfill management
Tox Free, St Marys	42–46 Charles Street, St Marys NSW 2760	<ul style="list-style-type: none"> <li>• Hazardous Waste</li> </ul>	EPL No. 20271	Landfill management
Veolia, Horsley Park	Walgrove Road, Horsley Park NSW 2175	<ul style="list-style-type: none"> <li>• General Solid Waste</li> <li>• Asbestos Contaminated General Solid Waste b</li> <li>• Virgin Excavated Natural Material (VENM)</li> <li>• Excavated Natural Material (ENM)</li> </ul>	EPL No. 20339	Landfill management
Western Sydney Airport (WSA)	Western Sydney Airport, Badgerys Creek NSW	<ul style="list-style-type: none"> <li>• Virgin Excavated Natural Material (VENM)</li> </ul>	Western Sydney Airport Plan and Construction Plan	Other development project





# Attachment 5 – Spoil Volumes Histogram

